Non-Defense Environmental Management

Proposed Appropriation Language

For Department of Energy expenses, including the purchase, construction and acquisition of plant and capital equipment and other expenses necessary for non-defense environmental management activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction or expansion, [$277,812,000] $228,553,000 to remain available until expended. *(Energy and Water Development Appropriations Act, 2001, as enacted by Section 1(a)(2) of Public Law 106-377.)*

Explanation of Change

None

Non-Defense Environmental Management

Program Mission

The Environmental Management (EM) program is responsible for managing and addressing the environmental legacy resulting from the production of nuclear weapons and nuclear energy research. The nuclear energy research and development efforts of the Department of Energy and its predecessors generated waste, pollution, and contamination which pose unique problems, including unprecedented volumes of contaminated soil and water, radiological hazards from special nuclear material, and a vast number of contaminated structures. Much of this infrastructure, waste, and contamination still exists and is largely maintained, decommissioned, managed, and remediated by the EM program, which is sometimes referred to as the "cleanup program." EM's responsibilities include facilities and areas at 113 geographic sites. These sites are located in 30 states and one territory and occupy an area equal to that of Rhode Island and Delaware combined -- or about 2 million acres.

The FY 2002 request for the Non-Defense Environmental Management appropriation is $228,553,000, a decrease of $50,642,000 from a FY 2001 Comparable Appropriation of $279,195,000. EM manages and cleans up sites used for civilian, energy research, and non-defense related programs under this appropriation. Pursuant to the FY 1998 House Energy and Water Development Report (House Report 105-190), no technical assistance contracts, nor support service contracts are funded in the Non-Defense Environmental Management appropriation.

Program Goal

The EM program has established a goal of cleaning up as many of its contaminated sites as possible by 2006 in a safe and cost-effective manner. By working towards this goal, EM can reduce the hazards presently facing its workforce and the public, and reduce the financial burden on the taxpayer. The FY 2002 budget request continues to reflect the program's emphasis on site closure and project completion--in other words, finishing our work as quickly as possible.

Program Objectives

- Continue to address the most serious environmental risks across the DOE complex and ensure that facilities and activities pose no undue risks to the public and worker safety and health.
- Continue surveillance and maintenance of facilities.
- Work aggressively with stakeholders and regulators to address the compliance challenges faced by the EM program.

Performance Measures

One way EM is ensuring success is to establish and manage based on sound performance measures. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward EM's goal of site closure and project completion. Detailed performance measure information can be found in the site details that follow this program overview.

Significant Accomplishments and Program Shifts

- Excess Facilities: The FY 2002 request includes the transfer of excess facilities at the Brookhaven National Laboratory and Oak Ridge from other DOE organizations (Office of Science). The funding amounts transferred from those organizations is limited to surveillance and maintenance to maintain the facilities in a safe condition. The facilities have been transferred to EM in order to manage the final disposition of excess contaminated physical facilities leading to significant risk and cost reductions.
- Grand Junction Transfer: The FY 2002 request includes a transfer of all projects managed by the Grand Junction Office from the Albuquerque Operations Office to the Idaho Operations Office. The Non-Defense funded projects transferred include the Monticello project, the Long-Term Surveillance and Maintenance Program, the Grand Junction project, the Atlas Site project, and the Uranium Mill Tailings Remedial Action-Groundwater project.
- Comparabilities: The FY 2002 request has been prepared on a comparable basis. The FY 2000 and FY 2001 Appropriations have been adjusted to reflect the following comparabilities: Movement of projects and/or activities between appropriations and/or project accounts; Safeguards and Security adjustments; movement of projects and/or activities between sites; Waste Re-Engineering from EM to Science; and Program Direction funding to cover full-time equivalents transferred from Nuclear Energy to EM related to Uranium Programs. Therefore, all activities are displayed as if they were appropriated in the same appropriation and program account under which they are requested in FY 2002.

Funding Profile

(dollars in thousands)

	FY 2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Non-Defense Environmental Management					
Site Closure	63,560	81,636	-28,639	52,997	43,000
Site/Project Completion	116,328	61,621	29,010	90,631	64,119
Post 2006 Completion	129,278	137,744	-2,141	135,603	120,053
Excess Facilities	0	0	0	0	1,381
Subtotal, Non-Defense	309,166	281,001	-1,770	279,231	228,553
Use of Prior Year Balances	-7,587	0	-36	-36	0
Total, Non-Defense	301,579	281,001	-1,806	279,195	228,553

Public Law Authorization:

Public Law 95-91, “Department of Energy Organization Act (1977)”
Public Law 95-604, “Uranium Mill Tailings Radiation Control Act (1978)”
Public Law 96-368, “West Valley Demonstration Project Act of 1980"
Public Law 100-616, “Uranium Mill Tailings Remedial Action Amendments Act of 1988"
Public Law 103-62, “Government Performance and Results Act of 1993"
Public Law 106-377, “The Energy and Water Development Appropriations Act, 2001"
Public Law 106-398, “The National Defense Authorization Act for Fiscal Year 2001"

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Albuquerque Operations Office					
Los Alamos National Laboratory	5,138	3,850	2,500	-1,350	-35.1%
Inhalation Toxicology Laboratory	537	561	1,398	837	149.2%
Total, Albuquerque Operations Office	5,675	4,411	3,898	-513	-11.6%
Chicago Operations Office					
Argonne National Laboratory - East	12,103	9,748	5,293	-4,455	-45.7%
Argonne National Laboratory - West	801	608	300	-308	-50.7%
Brookhaven National Laboratory	21,729	32,021	25,658	-6,363	-19.9%

	(dollars in thousands)				
	FY 2000	FY 2001	FY 2002	$ Change	% Change
Chicago Operations Office	2,761	2,000	1,220	-780	-39.0%
Total, Chicago Operations Office	37,394	44,377	32,471	-11,906	-26.8%
Excess Facilities					
Brookhaven National Laboratory	0	0	1,240	1,240	<999.9%
Oak Ridge National Laboratory	0	0	141	141	<999.9%
Total, Excess Facilities	0	0	1,381	1,381	<999.9%
Idaho Operations Office					
Grand Junction	33,093	19,872	9,250	-10,622	-53.5%
Idaho National Engineering and Environmental Laboratory	17,639	1,440	5,080	3,640	252.8%
Uranium Mill Tailings Remedial Action Groundwater Project	12,058	13,252	6,000	-7,252	-54.7%
Total, Idaho Operations Office	62,790	34,564	20,330	-14,234	-41.2%
Oakland Operations Office					
Energy Technology Eng. Center	15,552	17,000	13,305	-3,695	-21.7%
General Atomics	692	1,100	300	-800	-72.7%
General Electric	0	61	100	39	63.9%
Lab for Energy-Related Health Research	4,183	6,362	5,893	-469	-7.4%
Lawrence Berkeley National Laboratory	4,434	4,130	4,950	820	19.9%
Oakland Operations Office	3,291	1,625	164	-1,461	-89.9%
Stanford Linear Accelerator Center	1,637	1,989	2,617	628	31.6%
Total, Oakland Operations Office	29,789	32,267	27,329	-4,938	-15.3%
Oak Ridge Operations Office					
Weldon Spring Site	55,299	52,997	43,000	-9,997	-18.9%
Ohio Field Office					
Columbus	7,265	0	0	0	0.0%
Miamisburg	996	0	0	0	0.0%
West Valley	105,077	105,586	95,115	-10,471	-9.9%
Total, Ohio Field Office	113,338	105,586	95,115	-10,471	-9.9%
Richland Operations Office					
Hanford Site	1,380	1,485	1,485	0	0.0%

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Multi-Site Activities	3,501	3,544	3,544	0	0.0%
Subtotal, Non-Defense Environmental Management	309,166	279,231	228,553	-50,678	-18.1%
Use of Prior Year Balances	-7,587	-36	0	36	>999.9%
Total, Non-Defense Environmental Management	301,579	279,195	228,553	-50,642	-18.1%

Site Closure

Program Mission

The Non-Defense Environmental Management, Site Closure account, includes sites that have established the goal to complete its cleanup mission by the end of 2006. This account includes funding for the Weldon Spring Site in Missouri.

Program Goal

Accelerating cleanup and project completion are central goals of the EM program. Environmental Management sites are working to reduce outyear costs by safely completing projects as soon and as efficiently as possible. For those sites in the Site Closure account, the goal of the EM program is to complete the cleanup mission by FY 2006, after which no further Departmental mission is envisioned, except for limited long-term surveillance and maintenance. These sites may be available for some alternative use.

Program Objectives

- Accelerate cleanup efforts at sites and realize substantial savings by the resulting reduction in long-term program costs and ongoing support costs.
- Where possible, once the cleanup mission has been accomplished, make sites available to communities for other uses.

Performance Measures

One way EM is ensuring success is to establish and manage based on sound performance measures. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward EM's goal of site closure and project completion.

The chart below contains a summary of EM corporate performance measures for this program account.

EM Corporate Performance Measures [a] [b]

	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Estimate	Life-cycle
Non-Defense Site Closure				
Number of Release Site Completions	8	1	3	51
Number of Facilities Decommissioned	2	0	0	15
Volume of Mixed Low-Level Waste Disposed (m^3)	0	0	0	1

Significant Accomplishments and Program Shifts

The FY 2002 request reflects the EM's project-oriented structure as a key component of the effort to safely accelerate cleanup and reduce costs. All EM activities are organized into projects, which have a defined scope, schedule, cost, and end state. Specific accomplishments and program shifts may be found in the site details that follow this overview section.

Funding Profile

(dollars in thousands)

	FY2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Site Closure	63,560	81,636	-28,639	52,997	43,000
Total, Non-Defense Site Closure	63,560	81,636	-28,639	52,997	43,000

Public Law Authorization:

Public Law 95-91, "Department of Energy Organization Act (1977)"

Public Law 103-62, "Government Performance and Results Act of 1993"

Public Law 106-377, "The Energy and Water Development Appropriations Act, 2001"

[a] Life-cycle estimates for release sites, facilities, and high-level waste canisters include pre-1997 actuals. Waste type, nuclear materials, and spent nuclear fuel estimates are from fiscal years 1998 through 2070. In most instances, life-cycle refers to 1997-2070.

[b] This chart provides a consistent set of performance measures for the total EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Oak Ridge Operations Office	55,299	52,997	43,000	-9,997	-18.9%
Ohio Field Office	8,261	0	0	0	0.0%
Total, Non-Defense Site Closure	63,560	52,997	43,000	-9,997	-18.9%

Oak Ridge

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site Closure account at the Oak Ridge Operations Office is to direct and manage about 1,500,000 m^3 of waste at the 226 acre Weldon Spring Site Remedial Action Project in Missouri, which includes an abandoned decommissioned uranium processing plant, a contaminated quarry used for waste disposal, as well as numerous vicinity properties that were contaminated during processing operations.

Program Goal

The goal of this program is to use an accelerated remediation strategy to complete the environmental restoration and permanent on-site disposal of waste at the Weldon Spring Site by the end of FY 2002. This will enable the early completion of restoration work to reduce health risks and free up funding to accelerate remediation goals at other Oak Ridge sites. The post remediation activities require long-term surveillance and maintenance.

Program Objectives

The objective is to place all non-releasable contaminated material (soil, debris, pit waste) in the on-site disposal facility for long-term, permanent disposal. Raffinate pit waste was treated in the Chemical Stabilization/Solidification Facility utilizing state-of-the-art grout technology and placed in the disposal facility. Quarry waste held in temporary storage was placed in the disposal facility. Restricted use areas, including the disposal facility, will be placed under long-term surveillance and maintenance until restrictions are no longer needed. The long-term objective for restored land will be to return it to interested local stakeholders for unrestricted use and potential economic development. A stewardship plan in development will determine the appropriate, specific use of unrestricted land. Objectives are met through the long-time adherence to sound project management practices including the diligent management of project baselines, and the long time application of innovative fixed-price contracting.

Significant Accomplishments and Program Shifts

- Continued construction of the on-site disposal facility and completed placement of 1,500,000 m^3 of waste. Began construction of the disposal facility cover, began the quarry area and restoration of the borrow area, and initiated chemical plant area restoration and completed raffinate pits restoration. Completed and initiated operation on the engineering and construction of a quarry interceptor trench. Completed and submitted the Groundwater Operable Unit Interim Record of Decision to the Environmental Protection Agency for approval. Completed site water treatment plant dismantling (FY 2000).
- Raffinate pit restoration completed in FY 2000 and this Project Baseline Summary closed out (FY 2001).
- Complete final waste placement at the on-site disposal facility (FY 2001).
- Essentially complete disposal facility cover (FY 2001).
- Complete engineering for the quarry water treatment plant reclamation; and the interceptor trench will be operational (FY 2001).
- Begin treatment of trichloroethylene in site groundwater (FY 2001).
- Complete final Groundwater Operable Unit Record of Decision (FY 2002).
- Completion of the Weldon Spring Remedial Action Project (FY 2002).
- Complete final site restoration; transition to long term stewardship (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OR-715 / Weldon Spring Waste Treatment	6,400	930	0
OR-775 / Weldon Spring Disposal Facility	48,899	52,067	43,000
Total, Oak Ridge	55,299	52,997	43,000

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Weldon Spring Site Remedial Action Program	55,299	52,997	43,000	-9,997	-18.9%
Total, Oak Ridge	55,299	52,997	43,000	-9,997	-18.9%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Facility Decommissioning			
Cleanups	1	0	0
Release Site			
Cleanups	7	1	3

Site Description

The site, located 30 miles west of St. Louis, Missouri, was built by the Department of Army and used for explosives production until 1946. It was converted and operated for the Atomic Energy Commission as a feed materials plant between 1955 and 1966. During operations of the plant, the buildings, equipment, immediate terrain, process sewer system, and drainage easement to the Missouri River became contaminated.

The site consists of two separate facilities, the Weldon Spring Quarry (9 acres) and the Chemical Plant Site (217 acres). The latter includes the raffinate disposal areas (51 acres).

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Weldon Spring Site is managed through a fixed fee integrated contract utilizing innovative fixed price subcontracts to ensure the most cost efficient service to the Government. The scope planned for FY 2002 has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. The projects included in this section of the budget have had an external, independent cost review by Lockwood Greene Inc. and Project Development Corporation, and the funds requested for FY 2002 are appropriate based on the long history of fixed price contracts at the site.

OR-715 / Weldon Spring Waste Treatment **6,400** **930** **0**

The Weldon Spring Waste Treatment PBS will include the environmental restoration of four raffinate pits located at the Weldon Spring Chemical Plant site. These four surface impoundments were used to store slurries, sludges, and liquids from uranium processing activities performed in the period from the 1950s to the 1960s. The scope of the project included dewatering of the raffinate pits; consolidation and removal of debris from the pits; and removal and treatment of raffinate pit sludges; design, construction and operation of both pilot and full-scale sludge treatment plants; removal of pit liners and backfill/grading of the raffinate pit areas.

No Activity. These activities are complete.

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
Metrics			
Release Site			
Cleanups	2	0	0
OR-775 / Weldon Spring Disposal Facility	**48,899**	**52,067**	**43,000**

The Weldon Spring Disposal Facility PBS was chartered for the purpose of the restoration of the Weldon Spring chemical plant and quarry, so as to place them in a radiologically/chemically safe condition in accordance with DOE guidelines to eliminate potential hazards to the public and the environment. A summary of the actions at the quarry includes: removal of wastes dumped into the quarry; treatment of quarry pond water; and quarry restoration. At the chemical plant site the remedial activities include: removal of former utilities/infrastructure; dismantling of 43 facilities; excavation of contaminated soil and waste; treatment of contaminated surface water; and construction of a 1,500,000 cubic yards disposal facility to house the building debris and contaminated soils and waste.

- # Quarry Area - complete pilot testing of the groundwater interceptor trench; complete dismantling and disposition of the Quarry Water Treatment Plant.
- # Complete final site restoration, grading, and seeding; complete interpretive visitor's center facilities.
- # Complete construction of the disposal facility and final cell cap; and complete trichloroethylene treatment of groundwater.
- # Complete site support facility demobilization; the borrow area restoration, and transition the long-term stewardship of the site.
- # Complete final site Groundwater Record of Decision.
- # Complete the Weldon Spring Site Remedial Action Project in FY 2002.

Metrics			
Facility Decommissioning			
Cleanup	1	0	0
Release Site			
Cleanups	5	1	3

Key Milestones

- # Completed waste placement in the Weldon Spring Site Remedial Action Project disposal unit (September 2000).
- # Project mission completed (September 2000).
- # Weldon Spring complete quarry backfill (June 2001).
- # Weldon Spring disposal facility cap liner (September 2001).

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
# Complete the Weldon Spring Site Remedial Action Project (September 2002).			
Total, Oak Ridge	55,299	52,997	43,000

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
OR-715 / Weldon Spring Waste Treatment	
# Decrease reflects completion of activities.	-930
OR-775 / Weldon Spring Disposal Facility	
# Decrease reflects the completion phase of the Weldon Spring Remedial Action Project.	-9,067
Total Funding Change, Oak Ridge	-9,997

Ohio

Mission Supporting Goals and Objectives

Program Mission

There are no FY 2001 and FY 2002 activities under the Non-Defense Environmental Management, Site Closure account, therefore, Program Goals, Objectives, and Performance Measures are not described. However, there are FY 2000 accomplishments and funding information provided.

Significant Accomplishments and Program Shifts

Columbus Environmental Management Project

- Continued shipments of remediation and low-level waste (2,756 m^3 FY 2000).
- Completed independent verification of accessible areas at King Avenue (FY 2000).
- Continued interior decontamination of the West Jefferson Building JN-1 (FY 2000).

Significant Shifts

Activities for FY 2001 and FY 2002 for the Columbus Environmental Management Projects and the Miamisburg Environmental Management Project can be found in the Defense Facilities Closure Projects account.

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OH-CL-01 / King Avenue Site Decontamination	113	0	0
OH-CL-02 / West Jefferson Site Decontamination	5,955	0	0
OH-CL-03 / Project Management, Site Support and Maintenance	1,197	0	0
OH-MB-02-N / Main Hill Tritium (Non-Defense)	996	0	0
Total, Ohio	8,261	0	0

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Columbus	7,265	0	0	0	0.0%
Miamisburg	996	0	0	0	0.0%
Total, Ohio	8,261	0	0	0	0.0%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Release Site			
Cleanups	1	0	0
Facility Decommissioning			
Cleanups	1	0	0

Site Description

Columbus Environmental Management Project

Beginning in FY 2001, activities for this project have been transferred into the Defense Facilities Closure Projects account. The Columbus Environmental Management Project is comprised of two geographic sites (West Jefferson and King Avenue) located in and near Columbus, Ohio. This project consists of 15 facilities and two release sites, of which 12 facilities were completed by the end of FY 2000.

Miamisburg Environmental Management Project

Beginning in FY 2001, the Miamisburg Environmental Management Project activities have been transferred to the Defense Facilities Closure Projects account. The Miamisburg Environmental Management Project manages the Mound Plant located in Miamisburg, Ohio, ten miles south of the city of Dayton. The Mound plant supported research and development, testing, and production activities for the Department's defense nuclear weapons complex and energy research program.

Detailed Program Justification

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OH-CL-01 / King Avenue Site Decontamination	**113**	**0**	**0**

All originally planned decontamination in the nine major King Avenue buildings were completed in FY 2000. The decontamination followed a step-wise process for affected areas in each building:
1) pre-characterization/hazard assessment; 2) material/equipment removal; 3) radiometric characterization; 4) decontamination (scabbling, grit blasting, etc.); 5) final surveys; and 6) independent verification.

Original project scope is complete.

Metrics			
Release Site			
Cleanups	1	0	0
Facility Decommissioning			
Cleanups	1	0	0

OH-CL-02 / West Jefferson Site Decontamination	**5,955**	**0**	**0**

This project involves facility decommissioning at the West Jefferson site including the Hot Cell area from the retired reactor research facility, which requires quality assurance, waste management, and health and safety support during decommissioning. Upon completion, buildings will be demolished and grounds will be returned to Battelle for reuse without radiological restriction.

Activities for FY 2002 are funded in the Defense Facilities Closure Projects account under PBS OH-CL-02-D.

OH-CL-03 / Project Management, Site Support and Maintenance	**1,197**	**0**	**0**

The scope of this project is to provide technical support to the field work involved in the two decontamination projects, (King Avenue and West Jefferson sites), including surveillance and maintenance, project management and regulatory compliance.

Activities for FY 2002 are funded in the Defense Facilities Closure Project account under PBS OH-CL-03-D.

OH-MB-02-N / Main Hill Tritium (Non-Defense)	**996**	**0**	**0**

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This project provided for the safe shutdown and decontamination of the Semi-Works building New Cave area.

Activities for FY 2002 are funded in the Defense Facilities Closure Project account under PBS OH-MB-02.

Total, Ohio	8,261	0	0

Explanation of Funding Changes from FY 2001 to FY 2002

FY 2002 vs. FY 2001 ($000)

No funding changes.

Site/Project Completion

Program Mission

The Non-Defense Environmental Management, Site/Project Completion account provides funding for projects that are expected to be completed by 2006 at sites or facilities where a Department of Energy (DOE) mission will continue (e.g., scientific research) beyond 2006. Hence, this account focuses on the completion of specific Environmental Management (EM) projects at sites with expected enduring missions.

This account includes projects and sites under the following operations offices: Albuquerque, Chicago, Idaho, Oakland, and Richland. In a limited number of cases, sites have been placed in the Site/Project Completion account even though there is no expectation of a continuing mission after cleanup is completed. In these instances, use of the Site Closure account would have created an additional appropriation control for an operations/field office with a limited amount of associated funding, thereby hindering managerial flexibility in the execution of projects at these sites.

Program Goal

Accelerating cleanup and project completion are the central goals of the EM program. Environmental Management sites are working to reduce outyear costs by completing projects in the quickest, most efficient manner possible, thereby reducing life-cycle costs and schedules. For those sites funded within the Site/Project Completion account, the goal of the EM program is to complete as many projects as possible by 2006.

Program Objective

- Manage environmental cleanup projects at DOE sites where EM has established the goal of completion of all EM projects by FY 2006 (except for long-term stewardship activities), but where there will be a continuing Federal workforce at the site to carry out enduring non-EM missions, such as nuclear weapons activities or scientific research, and the necessary waste management activities to handle newly generated wastes from these missions.
- Work aggressively with stakeholders and regulators to address the compliance challenges faced by the EM program.

Performance Measures

One way EM is ensuring success is to establish and manage based on sound performance measures. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward EM's goal of site closure and project completion.

The chart below contains a summary of EM corporate performance measures for this program account. Detailed performance measure information can be found in the site details that follow this program overview.

EM Corporate Performance Measures [a] [b]

	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Estimate	Life-cycle
Non-Defense Site/Project Completion				
Number of Release Site Completions	24	20	22	802
Number of Facilities Decommissioned	24	7	2	178
Number of Facilities Deactivated	0	0	1	3
Volume of Mixed Low-Level Waste Treated (m^3)	170	0	0	247
Volume of Mixed Low-Level Waste Disposed (m^3)	144	1	1	234
Volume of Low-Level Waste Disposed (m^3)	422	140	22	3,428

Significant Accomplishments and Program Shifts

Grand Junction Transfer: The FY 2002 request includes a transfer of all projects managed by the Grand Junction Office from the Albuquerque Operations Office to the Idaho Operations Office. The Non-Defense funded projects transferred include the Monticello project, the Long-Term Surveillance and Maintenance Program, the Atlas Site Project, the Grand Junction project, and the UMTRA-Groundwater project.

[a] Life-cycle estimates for release sites, facilities, and high-level waste canisters include pre-1997 actuals. Waste type, nuclear materials, and spent nuclear fuel estimates are from fiscal years 1998 through 2070. In most instances, life-cycle refers to 1997-2070.

[b] This chart provides a consistent set of performance measures for the total EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding Profile

(dollars in thousands)

	FY 2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Site/Project Completion	116,328	61,621	29,010	90,631	64,119
Total, Non-Defense Site/Project Completion	116,328	61,621	29,010	90,631	64,119

Public Law Authorization:

Public Law 95-91, “Department of Energy Organization Act (1977)”

Public Law 95-604, “Uranium Mill Tailings Radiation Control Act (1978)”

Public Law 100-616, “Uranium Mill Tailings Remedial Action Amendments Act of 1988"

Public Law 103-62, “Government Performance and Results Act of 1993"

Public Law 106-377, “The Energy and Water Development Appropriations Act, 2001"

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Albuquerque Operations Office	537	561	1,398	837	149.2%
Chicago Operations Office	37,394	44,377	32,471	-11,906	-26.8%
Idaho Operations Office	62,790	29,512	14,915	-14,597	-49.5%
Oakland Operations Office	14,227	14,696	13,850	-846	-5.8%
Richland Operations Office	1,380	1,485	1,485	0	0.0%
Total, Non-Defense Site/Project Completion	116,328	90,631	64,119	-26,512	-29.3%

Albuquerque

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site/Project Completion account, managed through the Albuquerque Operations Office, is to support activities at the Inhalation Toxicology Laboratory in New Mexico.

Program Goal

The Albuquerque Operations Office Environmental Management Program, through a cooperative agreement, supports treatment, storage, and disposal of wastes generated from the Department's mission-related work at the Inhalation Toxicology Laboratory. The Office of Science, the landlord, is considering integrating waste management activities into the landlord program.

Program Objective

Until the transition of the Inhalation Toxicology Laboratory to the landlord occurs, the Albuquerque program objective is to: manage generated waste, including the treatment, storage, and disposal of low-level, mixed low-level, transuranic, and hazardous wastes; support program management activities for the waste management/environmental restoration programs; and continue groundwater surveillance and monitoring. The site currently operates under a cooperative agreement with the Department of Energy to conduct biomedical research. It is assumed that the cooperative agreement will remain in place until FY 2006.

Significant Accomplishments and Program Shifts

- Shipped small quantities of transuranic waste from the Inhalation Toxicology Laboratory to the Sandia National Laboratory for interim storage pending regulatory changes that would permit disposal at the Waste Isolation Pilot Plant (FY 2000).
- Continue monitoring groundwater at the Inhalation Toxicology Laboratory (FY 2001).
- Continue compliant treatment, storage, and disposal of waste from the Inhalation Toxicology Laboratory (FY 2001).

- Waste management continues to manage DOE generated waste at the Inhalation Toxicology Laboratory as long as a DOE mission continues to exist under the Cooperative Agreement (FY 2001).
- FY 2002 activities at the Inhalation Toxicology Laboratory include monitoring of former environmental restoration sites and includes primarily groundwater sampling (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
AL-005 / Inhalation Toxicology Laboratory	537	561	1,398
Total, Albuquerque	537	561	1,398

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Inhalation Toxicology Laboratory	537	561	1,398	837	149.2%
Total, Albuquerque	537	561	1,398	837	149.2%

Metrics Summary

	FY 2000	FY 2001	FY 2002
The project in the Detailed Program Justification has associated metrics; however, no metrics are reportable in the 3-year budget profile.			

Site Description

Inhalation Toxicology Laboratory

The Inhalation Toxicology Laboratory is located on Kirtland Air Force Base in Albuquerque, New Mexico. The site currently operates under a cooperative agreement with the Department of Energy to conduct biomedical research. All of the environmental restoration sites have been cleaned up. Monitoring and surveillance of the sites continue to support closure and to monitor the reduction of nitrates in groundwater beneath the former wastewater lagoons. The Environmental Management Program manages hazardous, low-level radioactive, mixed, transuranic, and non-hazardous biomedical wastes generated from on-going DOE research activities in an efficient and environmentally sound manner.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This Albuquerque Site is managed through a performance based management and operating contract to assure the most cost-effective services to the government. The scope planned for FY 2002 has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. The funds requested for FY 2002 are appropriate based on historical costs for similar work.

AL-005 / Inhalation Toxicology Laboratory 537 561 1,398

This project provides compliant waste management for biomedical research waste and environmental restoration groundwater monitoring and surveillance.

- **#** Continue groundwater monitoring of former environmental restoration sites and submit reports to the New Mexico Environment Department. Continue to manage DOE-generated waste as long as a DOE mission continues to exist under the Cooperative Agreement.

Key Milestones

- **#** Dispose of excess/old chemicals as hazardous waste (September 2000).
- **#** Groundwater monitoring reports (September 2000).
- **#** Surveillance and monitoring (September 2000).
- **#** Make low-level radioactive waste shipment to the Nevada Test Site (September 2000).
- **#** Complete Groundwater Monitoring Reports (September 2001).
- **#** Dispose of excess/old chemicals as hazardous waste (September 2001).
- **#** Conduct groundwater surveillance and monitoring (September 2001).
- **#** Dispose of excess/old chemicals (September 2002).
- **#** Make shipment of low-level waste to the Nevada Test Site (September 2002).
- **#** Surveillance and Monitoring (September 2002).
- **#** Groundwater monitoring reports (September 2002).

Total, Albuquerque 537 561 1,398

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
AL-005 / Inhalation Toxicology Laboratory	
# Increase in funding reflects continuation of on-site disposal of hazardous and mixed low-level waste.	837
Total Funding Change, Albuquerque	837

Chicago

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site/Project Completion account, carried out by the Chicago Operations Office, is to direct and manage EM activities at the following sites: the Argonne National Laboratory-East in Illinois; the Argonne National Laboratory-West in Idaho; and the Brookhaven National Laboratory in New York. Planned Environmental Management activities have been completed at the Ames Laboratory in Iowa and the Princeton Plasma Physics Laboratory in New Jersey.

The primary mission of the facilities under the Chicago Operations Office is research, development, and demonstration for DOE's Office of Science and Nuclear Energy programs. This includes energy research and development; basic and applied research on the fundamental properties of matter, physics, life and environmental sciences; magnetic confinement fusion and high-energy physics. The primary component of the Chicago Environmental Management Program in FY 2002 is environmental restoration, and managing the Center of Risk Excellence. Environmental restoration activities managed by the Chicago Operations Office include the management of groundwater, soil and debris contaminated with radionuclides and/or hazardous substances, and decontamination and decommissioning of facilities with radiological contamination.

The Chicago environmental restoration strategy focuses on maximizing near-term site completions, and optimizing the sequencing of work . This strategy has proven to be successful in that environmental restoration activities have been completed at several Chicago sites, including Ames Laboratory and Princeton Plasma Physics Laboratory. This allows allocated funding to be devoted to fewer remaining sites.

Waste management responsibilities for newly generated waste, formerly managed under the Environmental Management Program, were transferred in FY 2001 to the Office of Science for Ames, Argonne National Laboratory-East, Brookhaven National Laboratory, and the Princeton Plasma Physics Laboratory. Waste management responsibilities for the Argonne National Laboratory - West were previously transferred to the Office of Nuclear Energy. Management for surveillance and monitoring of the Princeton Plasma Physics Laboratory Site C/D was also transferred to the Office of Science in FY 2001.

Program Goal

The goal is to complete remediation of all currently baselined scope for Chicago managed sites by FY 2006, and transfer long-term surveillance and maintenance activities to the landlord programs after completion of site cleanup activities.

The Brookhaven High Flux Beam Reactor was accepted into the EM program in April 2000. Decommissioning plans are being developed. Completion of this new project will extend beyond FY 2006. Beginning in FY 2002, funding for the High Flux Beam Reactor decommissioning project will be included in a new, separate program account, "Excess Facilities Transfer." Surveillance and maintenance will continue for the High Flux Beam Reactor following stabilization activities that were funded by the Office of Science in FY 2000 and FY 2001.

Program Objectives

The objective is to manage the risks associated with sites contaminated with various hazardous and radioactive materials. This includes responsibility for the assessment and remediation of contaminated sites and facilities; development, demonstration, testing, and evaluation of new cleanup technologies; environmental safety; and completion of decontamination and decommissioning of surplus facilities in the current EM baseline. The Chicago Operations Office proactively employs innovative and alternative technologies, wherever appropriate and applicable, to address remedial, as well as decontamination and decommissioning problems, in order to reduce cost and risk, and to improve the schedule.

Environmental restoration activities at Chicago were completed by the end of FY 1999, other than continued monitoring, at all sites except Argonne National Laboratory-East, Argonne National Laboratory-West, and Brookhaven National Laboratory. Remediation activities will continue under the Brookhaven National Laboratory Interagency Agreement/Federal Facilities Agreement, the Argonne National Laboratory-West Federal Facility Agreement/Consent Order, and the Argonne National Laboratory-East Resource Conservation and Recovery Act Part B Corrective Action permit.

In achieving our highest priority goals, the Chicago Operations Office will seek to apply innovative science and technology solutions that facilitate cleanup goals safer, less expensive, and faster. For instance at the Brookhaven National Laboratory, thermal desorption will be used for treatment of mercury-contaminated soils. At the Argonne National Laboratory, phytoremediation will be used to remediate soil.

Significant Accomplishments and Program Shifts

- At Brookhaven National Laboratory, continued on-site and off-site groundwater treatment systems; conducted remedial design and remedial action for additional groundwater, soil, and sediment remediation; treated and disposed of additional legacy waste. Continued characterization and began cleanup work, including removal of the Pile Fan Sump and removal of 50 percent of the above grade ducts at the Brookhaven Graphite Research Reactor. Use of innovative technologies at the Brookhaven National Laboratory included thermal desorption for treatment of mercury, use of viscous liquid barrier, and systems to sense and characterize radionuclides in soils (FY 2000).

- At Brookhaven National Laboratory, continue on-site and off-site groundwater treatment systems and soil vapor extraction systems and design and install additional groundwater treatment systems. Begin remediation for contaminated soils and out-of-service tanks at the Waste Concentration Facility and Building 650 (Hot Laundry). Treat and dispose of most remaining legacy waste. Continue characterization, and complete removal of above grade ducts and assessment activities for below grade duct work for the Graphite Research Reactor decommissioning (FY 2001).

- At Brookhaven National Laboratory, the remediation of contaminated soils and out-of-service tanks at the Waste Concentration Facility and Building 650 (Hot Laundry) will be completed. Demolition will begin of buildings at the Hazardous Waste Management Facility. Operation and monitoring of existing groundwater treatment systems will continue. Design will be completed and installation activities initiated for additional groundwater treatment systems. Surveillance and maintenance and characterization activities will continue at the Brookhaven Graphite Research Reactor (FY 2002).

- At Argonne National Laboratory-East, continued remedial actions including phytoremediation, groundwater extraction system, and groundwater monitoring; completed decontamination and decommissioning of the Chicago Pile-5 Reactor; initiated decontamination and decommissioning of the 60-inch Cyclotron Reactor and the Building 310 Retention Tanks decontamination and decommissioning project (FY 2000).

- At Argonne National Laboratory-East, corrective actions for the East-Northeast 319 Area Landfill will be completed and will continue for the 800 Area Suspect Solid Waste Landfill and the 317 Area Deep and North Vaults. Lime sludge removal and operation and maintenance activities will also continue. Complete decontamination and decommissioning of the 60-inch Cyclotron Reactor. Continue decontamination and decommissioning of the Building 310 Retention Tank Facility; and initiate field work on the following decontamination and decommissioning activities: Juggernaut Reactor (assessment activities) and the Building 301 Hot Cells project (FY 2001).

- At Argonne National Laboratory-East, the remediation of the 317 Area Deep Vault will be completed. Corrective actions will begin on the 319 Area Shooting Range and Building 310 Retention Tanks and Sumps integrity testing, and continue on the 317 Area North Vault, and 317 Area East Vaults Footing Drain, and 800 Area Suspect Solid Waste Landfill. Lime sludge removal and operation and maintenance activities will also continue. The Juggernaut Reactor and Building 310 Retention Tanks decontamination and decommissioning projects will continue. Work will also continue on the Building 301 Hot Cells decontamination and decommissioning projects and begin on Zero Power Reactors 6 and 9 (FY 2002).

- At Argonne National Laboratory-West, continued final remedial action (phytoremediation) for the Waste Area Group 9 site and excavated and disposed of contaminated soil (FY 2000). Continue operation and maintenance activities. The FY 2000 draft summary report of phytoremediation results for the first two years will be prepared and submitted to the regulators for approval (FY 2001).

- At Argonne National Laboratory-West, continue operation and maintenance activities for soil remediation (phytoremediation activities of planting and harvesting) (FY 2002).

- At the Princeton Plasma Physics Laboratory Site C/D, continued surveillance and monitoring activities (FY 2000).

- Management for continued surveillance and monitoring of the Princeton Plasma Physics Laboratory Site C/D was transferred to the Office of Science in FY 2001.
- Potentially Responsible Party payments will be made against DOE's portion of the Princeton University Site A/B remediation costs as a Potentially Responsible Party (FY 2000/FY 2001/FY 2002).
- Continued to perform all necessary activities to compliantly treat, store, and dispose of all applicable waste types at Ames, Argonne National Laboratory-East, Brookhaven National Laboratory, and the Princeton Plasma Physics Laboratory (FY 2000).
- Waste management activities at four remaining sites, Ames, Argonne National Laboratory-East, Brookhaven National Laboratory, and Princeton Plasma Physics Laboratory, were transferred to the Office of Science in FY 2001.

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
CH-ANLEDD / Argonne National Laboratory-East Decontamination and Decommissioning Actions	6,847	5,509	2,000
CH-ANLEPM / Argonne National Laboratory-East Program Management	470	512	573
CH-ANLERA / Argonne National Laboratory-East Remedial Actions	4,786	3,727	2,720
CH-ANLWRA / Argonne National Laboratory-West Remedial Actions	801	608	300
CH-BRNLBYW / Brookhaven National Laboratory Boneyard Waste	2,986	3,037	0
CH-BRNLDD / Brookhaven National Laboratory Graphite Research Reactor	1,762	3,721	1,500
CH-BRNLPM / Brookhaven National Laboratory Program Management	2,002	3,568	2,000
CH-BRNLRA / Brookhaven National Laboratory Remedial Actions	14,979	21,695	22,158
CH-CHOOPUAB / Princeton Site A/B Payments	16	5	220
CH-COPS / Chicago Operations Program Support	745	0	0
CH-CRE / Chicago Center for Risk Excellence	2,000	1,995	1,000
Total, Chicago	37,394	44,377	32,471

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Argonne National Laboratory-East (IL)	12,103	9,748	5,293	-4,455	-45.7%
Argonne National Laboratory-West (ID)	801	608	300	-308	-50.7%
Brookhaven National Laboratory (NY)	21,729	32,021	25,658	-6,363	-19.9%
Chicago Operations Office (IL)	2,761	2,000	1,220	-780	0.0%

Total, Chicago	37,394	44,377	32,471	-11,906	-26.8%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Release Site Cleanups	14	11	0
Facilities Decommissioning Cleanup	7	4	2

Site Description

AMES Laboratory (Iowa State University)

Ames Laboratory is an Office of Science laboratory in Ames, Iowa that conducts basic and applied research in the preparation, characterization, and evaluation of properties of metals and their alloys, especially rare earth metals. Ames Laboratory also performs materials research, high-performance computing, and environmental research. It seeks solutions to energy-related problems through the exploration of physics, chemistry, engineering, applied mathematics, and materials sciences.

Argonne National Laboratory-East

Argonne National Laboratory-East is a research laboratory occupying a 700 acre tract of land located approximately 22 miles southwest of downtown Chicago in DuPage County, Illinois. It is an Office of Science multidisciplinary research and development laboratory that conducts basic and applied research to support the development of energy-related technologies. Energy-related research projects include safety studies for light-water reactors, developing components and materials for fission and fusion reactors, superconductivity research, improvements in coal power, synchrotron radiation sources, and waste heat utilization. Further research includes medical radioisotope technology, environmental research, genetics research, materials engineering, ceramics, carcinogenesis, and the biological effects of ionizing radiation. Argonne-East is the home for the Advanced Photon Source Facility, which provides experiment capability with the use of photons for industry, government, and academic scientists to create advances in pharmaceuticals, adhesives, food processing, and many other applications.

Argonne National Laboratory-West

The Argonne National Laboratory-West site is located 35 miles west of Idaho Falls, Idaho, and is operated by the University of Chicago under the direction of the Chicago Operations Office. The site was constructed for the purpose of carrying out research and development for liquid metal fast breeder reactor technology. The current mission for the Argonne National Laboratory-West includes technology development for spent nuclear fuel and radioactive waste treatment, and reactor and fuel cycle safety. These activities are administered through the Office of Nuclear Energy.

Brookhaven National Laboratory

The Brookhaven National Laboratory site is an Office of Science multi-purpose research and development laboratory located in central Suffolk County on Long Island, about 60 miles east of New York City. Brookhaven National Laboratory's current mission is to conduct fundamental research, including conception, design, construction, and operation of large complex research facilities. These facilities are used for both basic and applied research in high energy and nuclear physics; in basic energy sciences emphasizing fundamental research on biological, chemical, and physical phenomena underlying energy-related transfer, conversion and storage systems; in life sciences; and in nuclear medical applications of nuclear techniques.

Princeton Plasma Physics Laboratory

The Princeton Plasma Physics Laboratory in Princeton, New Jersey, is an Office of Science single purpose laboratory focusing on research and development for fusion energy programs. The Laboratory is engaged in a broad spectrum of plasma physics research ranging from the theoretical analysis and modeling of fusion plasmas to the laboratory testing of plasmas approaching the conditions necessary for an energy producing fusion reactor.

Center for Risk Excellence

Risk informed decision making is critical to the success of the EM program. The EM Health and Safety Risk Program provides the analytical framework and technical support necessary for credible, risk-based environmental decisions. The program provides technical support to EM field elements for developing and implementing site-specific processes for risk analysis, risk management, risk communication and priority setting initiatives; technical peer review and comments on scientific and technical risk materials; development of new risk tools and training; and integration of risk information into the planning process. This support helps to ensure that the right information is available to prioritize and fund high risk projects so that risk to workers, the public, and the environment decrease over time. Previously this activity was funded in the Office of Science and Technology account.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Chicago EM program makes extensive use of firm fixed-price management and integration subcontracts and other subcontracting mechanisms, such as basic ordering agreements and time and material subcontracts, to assure the most cost-effective services to the government.

The two major environmental restoration programs at the Argonne National Laboratory-East and the Brookhaven National Laboratory have had independent cost, scope, and schedule reviews by the Army Corps of Engineers and are baselined and under formal change control procedures. Additionally, the Brookhaven National Laboratory recently had an independent review performed by the EM Office of Project Management. Waste management activities were transferred to the Office of Science in FY 2001, as well as surveillance and monitoring of the Princeton Plasma Physics Laboratory Site C/D.

CH-ANLEDD / Argonne National Laboratory-East

Decontamination and Decommissioning Actions	**6,847**	**5,509**	**2,000**

This project conducts facility decontamination and decommissioning activities at the Argonne National Laboratory-East.

The Juggernaut Reactor and Building 310 Retention Tanks decontamination and decommissioning projects will be continued. Work will continue on the Building 301 Hot Cells decontamination and decommissioning projects.

Metrics			
Facilities Decommissioning			
Cleanup	6	3	0

Key Milestones

Completed all activities associated with the 60 inch Cyclotron Decontamination and Decommissioning Project (March 2001).

CH-ANLEPM / Argonne National Laboratory-East Program

Management	**470**	**512**	**573**

This project provides program management support activities to provide a safe and effective environmental management program to reduce environmental and health risks, including support of environmental and compliance, quality assurance, safety and health, project cost and schedule support, and sample and data management.

Continue to support the Argonne National Laboratory-East Remedial Action and decontamination/decommissioning programs, including cost and schedule planning and reporting; stakeholder and regulatory interactions; budget preparation; and data calls.

(dollars in thousands)

FY 2000	FY 2001	FY 2002

CH-ANLERA / Argonne National Laboratory-East Remedial Actions 4,786 3,727 2,720

This project conducts remediation activities at the Argonne National Laboratory-East to reduce risk and comply with the Resource Conservation and Recovery Act permit.

The remediation of the 317 Area Deep Vault will be completed. Remediation of the 317 Area North Vault, and 800 Area Suspect Solid Waste Landfill will continue. Lime sludge removal and operations and maintenance activities will also continue.

Metrics			
Release Site			
Cleanups	11	4	0
Key Milestones			
# East North East Landfill Final Construction report and request for No Further Action (September 2001).			
# Submit to DOE request for approval of No Further Action for Solid Waste Management Unit #743 - "317 Area Deep Vault" (September 2002).			

CH-ANLWRA / Argonne National Laboratory-West Remedial Actions 801 608 300

This project conducts activities at the Argonne National Laboratory-West Waste Area Group 9 to assess and reduce risk and comply with the Federal Facilities Agreement/Consent Order.

All remediation activities have been completed except for continuing operation and maintenance activities for soil remediation (phytoremediation activities of planting, harvesting) and monitoring.

Metrics			
Release Site			
Cleanups	0	3	0
Key Milestones			
# Mission completed (September 2001).			

CH-BRNLBYW / Brookhaven National Laboratory Boneyard Waste 2,986 3,037 0

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This project treats and disposes of legacy wastes at the old Hazardous Waste Management Area, such as bin sludges, connex and concrete containers, dry active wastes, and shielding blocks/debris. Wastes must be disposed before soil remediation in this area can begin. Most activities are expected to be completed in FY 2001.

Key Milestones
Mission completed (September 2001).

CH-BRNLDD / Brookhaven National Laboratory Graphite Research Reactor 1,762 3,721 1,500

This project characterizes, stabilizes, decontaminates and decommissions the Brookhaven Graphite Research Reactor.

Continue surveillance and maintenance and characterization at the Brookhaven Graphite Research Reactor.

Metrics			
Release Site			
Cleanups	1	0	0
Facilities Decommissioning			
Cleanup	1	1	0

Key Milestones
Draft final completion report Brookhaven Graphite Research Reactor above grade duct (May 2001).

CH-BRNLPM / Brookhaven National Laboratory Program Management 2,002 3,568 2,000

This project provides program management support activities to provide a safe and effective environmental management program to reduce environmental and health risks, including: support of environmental compliance, quality assurance, safety and health; project cost and schedule support and sample and data management. It also includes grant funding for an Interagency Agreement with New York State Department of Environmental Conservation for oversight of Brookhaven's environmental restoration program.

Programmatic supervision and support for Interagency Agreement oversight activities will continue to be provided, including: cost and schedule control, project integration and performance, community relations, regulatory actions, and engineering support.

(dollars in thousands)

FY 2000	FY 2001	FY 2002

Key Milestones

Issue Interagency Agreement Schedule Update to the Environmental Protection Agency/Department of Environmental Conservation (November 2001).

CH-BRNLRA / Brookhaven National Laboratory Remedial Actions 14,979 21,695 22,158

This project addresses areas with known or potential risks to human health and the environment under a Superfund Interagency Agreement among DOE, the U.S. Environmental Protection Agency, and the New York State Department of Environmental Conservation. Groundwater, soil, and sediment cleanup activities are included.

The following will be ongoing: sitewide monitoring and data management activities and continued operation of on-site and off-site groundwater treatment systems. The remediation of contaminated soil and out-of-service tanks at the Waste Concentration Facility and Building 650 (Hot Laundry) will be completed. Design will be completed and installation activities initiated for additional groundwater treatment systems. Demolition of buildings will begin at the Former Hazardous Waste Management Facility.

Metrics			
Release Site			
Cleanups	2	4	0
Facilities Decommissioning			
Cleanup	0	0	2

Key Milestones

Submit Building 650 Soil Remedial Action Work Plan to the Environmental Protection Agency/Department of Environmental Conservation (July 2001).

Submit 90 percent North Street East design to the Environmental Protection Agency/Department of Environmental Conservation (January 2002).

CH-CHOOPUAB / Princeton Site A/B Payments 16 5 220

Potentially responsible party payments are required to cover DOE's responsibility, as a previous lessee, for a portion of the characterization/remediation costs for Princeton University's Site A/B, in accordance with the New Jersey Department of Environmental Protection/Princeton University Memorandum of Understanding and DOE/Princeton University Memorandum of Agreement.

(dollars in thousands)

FY 2000	FY 2001	FY 2002

Payment of DOE's yearly portion, as a Potentially Responsible Party, for characterization and remediation costs.

CH-COPS / Chicago Operations Program Support 745 0 0

This program support activity, originally supported both Chicago and the National Environmental Management Mission. Some activities are now included in other PBS's.

CH-CRE / Chicago Center for Risk Excellence 2,000 1,995 1,000

The DOE Center for Risk Excellence, in partnership with the National Health and Safety Risk Program, supports Field-based environmental restoration and waste management activities and develops risk-based decision making approaches, including guidance documents and metrics to measure risk reduction to meet goals established for EM under the Government Performance and Results Act and the DOE strategic plan.

Develop approaches for assessing specific risks and trade-offs among risks, including Worker Health and Safety Risk, Ecological Risk, Chemical Mixtures Risk, and Programmatic Risk.

Develop methods of assessing risks within an integrated framework for multiple types of receptors and resources.

Provide risk assessment support to sites and program offices to evaluate acute and chronic worker exposures per emerging toxicity data in support of risk-based protective standards and risk analyses of cleanup levels.

Develop strategies for using risk information to guide the management of contaminated vadose zone issues.

Evaluate trade-offs associated with various waste and nuclear materials management control and configuration.

Develop risk-based metrics for indicating environmental management progress.

Prepare and disseminate the Risk Excellence Notes newsletter and maintain and enhance the Center for Risk Excellence web site to facilitate real-time sharing of risk information among multiple internal and external parties.

Develop and present training materials and academic, agency, and Tribal educational outreach initiatives.

Compile data on cleanup criteria and residual risks as they are identified for individual DOE sites (Records of Decisions), evaluate these data for trends, and maintain this information in a broadly available database.

New approaches for updating risk assessments and monitoring programs conducted as part of the overall long-term protection plan at individual sites. Methods for managing health and environmental risks over the long-term.

Management of the International Risk Assessment Network with Eastern European countries.

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
Total, Chicago	**37,394**	**44,377**	**32,471**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
CH-ANLEDD / Argonne National Laboratory-East Decontamination and Decommissioning Actions	
# Decrease in funding reflects slow-down in pace of decontamination and decommissioning projects to support funding of higher priorities.	-3,509
CH-ANLEPM / Argonne National Laboratory-East Program Management	
# No significant change.	61
CH-ANLERA / Argonne National Laboratory-East Remedial Actions	
# Decrease in funding reflects completion of the East-Northeast 319 landfill remediation.	-1,007
CH-ANLWRA / Argonne National Laboratory-West Remedial Actions	
# Decrease in funding reflects reduced operation and maintenance costs for the final remedy.	-308
CH-BRNLBYW / Brookhaven National Laboratory Boneyard Waste	
# Decrease in funding reflects completion of most activities in this Project Baseline Summary in FY 2001.	-3,037
CH-BRNLDD / Brookhaven National Laboratory Graphite Research Reactor	
# Decrease in funding reflects deferral in decontamination and decommissioning actions until future years to support funding of higher priorities.	-2,221
CH-BRNLPM / Brookhaven National Laboratory Program Management	
# Decrease in funding reflects decrease in estimated costs.	-1,568
CH-BRNLRA / Brookhaven National Laboratory Remedial Actions	
# Increase in funding reflects additional groundwater treatment systems.	463
CH-CHOOPUAB / Princeton Site A/B Payments	
# Increase in funding reflects DOE's portion of characterization and remediation costs.	215
CH-CRE / Chicago Center for Risk Excellence	
# Decrease reflects decision to support funding of higher priorities.	-995

	FY 2002 vs. FY 2001 ($000)
Total Funding Change, Chicago	-11,906

Idaho

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site/Project Completion account, managed by the Idaho Operations Office is to provide interim dry storage for fuel bearing materials currently in the Test Area North Hot Shop Pool. The pool inventory includes Three Mile Island Unit-2 core debris, loss of fluid test fuel, and small quantities of commercial fuels. This program will also provide for the deactivation activities associated with two excess reactors and their required surveillance and maintenance. In addition, the activities at the uranium millsite at Moab, Utah will be supported. This program will also manage cleanup of all release sites assigned to the program and to continue several longer-term programs as required. The release sites include the 57 acre Grand Junction Office facility, the Monticello mill site in Utah, and the 22 inactive uranium millsites that were designated by Congress for cleanup by the Uranium Mill Tailings Radiation Control Act of 1978. Continuing missions include the Long-Term Surveillance and Maintenance Program (proposed for transfer to the Non-Defense Post 2006 Completion account in FY 2002) and the Uranium Lease Management Program. The current mission also includes facility and waste management of the Grand Junction Office site. It is no longer cost-effective to operate and maintain the entire 57 acre Grand Junction Office for the planned mission. The Department is working with the Grand Junction community to identify options for making all or part of the facility available for other productive uses, while continuing the Grand Junction Office mission in Grand Junction. The Grand Junction projects were previously the responsibility of the Albuquerque Operations Office.

Program Goal

Throughout the DOE complex, EM is focused on accelerating cleanup and, where possible, completing its mission by FY 2006. At the Idaho National Engineering and Environmental Laboratory, both of the non-defense elements of the EM mission will be completed within the FY 2006 time frame. The Materials Test Reactor and Power Burst Facilities will be deactivated, the Three Mile Island Unit-2 fuel will be in safe, dry storage, and EM's National Low-Level Waste Program responsibilities will be completed. The continued monitoring of Three Mile Island Unit-2 fuel and the operation of the Independent Spent Fuel Storage Installation Facility will be funded under the Defense Environmental Restoration and Waste Management Post 2006 Completion Idaho account. The cleanup of the Moab Site in Utah will be accomplished.

The goal for the Grand Junction Office is to complete the site cleanup, transfer site ownership for alternative uses by the end of FY 2001, and to continue DOE mission at a small portion of the facility using a lease-back arrangement.

Program Objective

One objective of the program was achieved by completing construction of the Three Mile Island Unit-2 fuel storage facility in FY 1999. Future objectives include completing the majority of non-defense activities in the Spent Nuclear Fuel Stabilization Program and reducing surveillance and maintenance costs by deactivating two excess reactors.

One objective of the Grand Junction Office is cleanup of the Monticello, Utah mill which was completed in FY 2000 and vicinity property sites, with the exception of the remediation of the contaminated groundwater, for which a source removal and interim remedial action strategy is being pursued through FY 2005. Beyond FY 2001, the Grand Junction Office will continue to manage the Long-Term Surveillance and Maintenance, Uranium Leasing, Maxey Flats, and Pinellas environmental restoration programs, as well as the ongoing Uranium Mill Tailings Remedial Action Groundwater Project, and the recently authorized Moab, Utah uranium mill tailings cleanup.

Significant Accomplishments and Program Shifts

Idaho National Engineering and Environmental Laboratory

- Completed Materials Test Reactor Fuel receipt criteria (FY 2000/ID-OIM-110-N).
- Completed the Power Burst Facility Transportation Plan (FY 2000/ID-OIM-110-N).
- Completed eight to nine canister change-outs at the Irradiated Fuel Storage Facility (FY 2000/OIM-110-N).
- Repackage all Materials Test Reactor spent nuclear fuel and continue preparations for transport of fuel from the Materials Test Reactor to the Idaho Nuclear Technology and Engineering Center for dry storage (FY 2001/ID-OIM-110-N).
- Continue to monitor and maintain each of the facilities at the Power Burst Facility and the Materials Test Reactor to provide a safe working environment for the personnel working in and around the facilities, and prevent release of radioactive or hazardous materials to the environment (FY 2000/FY 2001/ID-OIM-112-N).
- Complete fabrication, delivery, and acceptance of equipment to support acceptance of the horizontal storage modules and dry shielded canisters. The dry shielded canisters will be used to transfer the Three Mile Island Unit-2 spent nuclear fuel from Test Area North to the Idaho Nuclear Technology and Engineering Center and to store the fuel in the independent spent fuel storage facility horizontal storage units (FY 2001/ID-SNF-104-N).
- Initiate the design and construction of the Loss of Fluid Test and commercial fuel storage equipment (FY 2001/ID-SNF-104-N).

Monticello Projects

- Completed repository construction; initiated mill site restoration; continued interim remedial action for groundwater; and deleted the Monticello Vicinity Properties site from the National Priorities List (FY 2000/ID-GJ-104, formerly AL-022).
- Complete mill site restoration and restoration oversight; provide for Operable Unit I and Operable Unit II Completion Reports and Remedial Action Reports; comply with mill site remediation contract requirements; continue groundwater Operable Unit III interim remedial action, annual monitoring, and Feasibility Study Document Revision; manage supplemental standards and repository long-term surveillance activities; and provide for the state grant (FY 2001/ID-GJ-104, formerly AL-022).

Grand Junction Office

- Continue active cleanup at three Uranium Mill Tailing Remedial Action groundwater sites on Navajo land (Tuba City, Arizona, and Monument Valley, Arizona) (FY 2000/FY 2001/FY 2002/ID-GJ-105, formerly AL-023).
- Conducted site environmental monitoring; provided for facility management support; provided support for long-term surveillance and maintenance for up to 30 sites, and Uranium Leasing Program activities for 43 sites; and continued reclamation of disturbed uranium lease tracts where no lease holder is liable (FY 2000/ID-GJ-106, formerly AL-024).
- Continue the Uranium Leasing Program activities for 43 sites and reclamation of disturbed uranium lease tracts where no lease holder is liable; continue surveillance monitoring of the Grand Junction Office site groundwater until the transfer into the Long-Term Surveillance and Maintenance Program; reimburse former site contractor for contract closeout costs; and provide for the contract termination, liabilities, and transition costs (FY 2001/ID-GJ-106, formerly AL-024).
- Provide for Bendix and Rust (previous site contractors) retiree medical insurance benefits. The Grand Junction Office is obligated to pay the premiums for this medical insurance for the retirees until their death (FY 2001/ID-GJ-106, formerly AL-024).
- Provide for Rust litigation relating to a whistle blower case in which the Department of Energy and Rust are currently involved. Costs have been incurred relating to the case and a hearing with an administrative judge has occurred. The judge's decision will determine whether there will be additional costs. Rust has incurred legal costs for the hearing (FY 2001/ID-GJ-106, formerly AL-024).
- Provide for transition to a new contract including additional cost of contractor overlap (FY 2001/ID-GJ-106, formerly AL-024).
- Provide plan for the Moab Utah Site for disposition of mill tailing pile and get plan reviewed by the National Academy of Science. (This is a Grand Junction project that was transferred from the Albuquerque Operations Office to the Idaho Operations Office) (FY 2002/ID-GJ-106, formerly AL-034).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
ID-GJ-104 / Monticello Projects	20,918	9,067	1,000
ID-GJ-105 / UMTRA Groundwater	12,058	13,252	6,000
ID-GJ-106 / GJO All Other Projects	12,175	5,753	2,835
ID-OIM-110-N / Pre-FY 2007 Surplus Facility Deactivation Project - Non-Defense	573	185	3,745
ID-OIM-112-N / Pre-FY 2007 Idaho Engineering and Environmental Laboratory Surveillance and Maintenance - Non-Defense	1,471	1,255	1,335
ID-SNF-104-N / Constructed New Facilities - Non-Defense	15,000	0	0
ID-WM-102 / National Low-Level Waste Program	595	0	0
Total, Idaho	62,790	29,512	14,915

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Grand Junction Office	33,093	14,820	3,835	-10,985	-74.1%
Idaho National Engineering and Environmental Laboratory	17,639	1,440	5,080	3,640	252.8%
UMTRA Groundwater	12,058	13,252	6,000	-7,252	-54.7%
Total, Idaho	62,790	29,512	14,915	-14,597	-49.5%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Release Site Cleanups	5	0	0
Low-Level Waste Disposal (m^3)	72	22	10
Facilities Deactivation During Period	0	0	1
Facilities Decommissioning Cleanup	17	3	0

Site Description

Idaho National Engineering and Environmental Laboratory

The Idaho National Engineering and Environmental Laboratory, established as the National Reactor Testing Station in 1949, occupies 890 square miles in the Snake River Plain of Southeastern Idaho. Over the years, 52 reactors have been constructed and operated at the Idaho National Engineering and Environmental Laboratory. Three of these reactor facilities (Power Burst Facility, Advanced and Coupled Fast Reactivity Measurement Facility, and Materials Test Reactor) are managed by the Office of Environmental Management.

Grand Junction

The Grand Junction Office is located immediately south of the City of Grand Junction, Colorado, on a 57 acre adjacent to the Gunnison River. The Grand Junction Office supports environmental management activities in the areas of site characterization, project integration and coordination, remedial design, remedial action, independent verification, decontamination and dismantlement, and long-term surveillance and maintenance. Current Grand Junction Office project assignments include: the Monticello mill site and vicinity properties cleanup; the Grand Junction Office Remedial Action Project; the Long-Term Surveillance and Maintenance Program (transferred to the Non-Defense Environmental Management Post 2006 Completion account in FY 2002); the Uranium Leasing Program; the Grand Junction Office Waste Management and Landlord Programs; and the Uranium Mill Tailing Remedial Action Groundwater Project. The Grand Junction Office Program is comprised of 44 release sites and 44 facilities, and the Uranium Mill Tailings Remedial Action Groundwater Project consists of 22 release sites.

The Grand Junction Office also performs the groundwater cleanup (Pinellas) and Maxey Flats Field Management projects (both contained in the Defense Environmental Restoration and Waste Management Site/Project Completion account), and cleanup of uranium mill tailings at the Moab, Utah Site is included in this account.

Monticello Projects

Environmental cleanup at and around Monticello, Utah, include remedial action on a 110-acre inactive Government-owned uranium/vanadium mill processing site and the adjacent private and DOE-owned peripheral properties; assessment and remediation of surface and groundwater contamination near Monticello; and remediation of more than 400 private properties (referred to as “Vicinity Properties”), which have been contaminated by mill tailings from the Monticello mill site.

The Monticello Projects are high visibility projects with the Environmental Protection Agency and the State of Utah. The Monticello Vicinity Properties Site and the Monticello Mill Tailings Site, both located in Monticello, Utah, are on the National Priorities List are being remediated in accordance with the Comprehensive Environmental Response, Compensation and Liability Act. A Federal Facility Agreement among DOE, the Environmental Protection Agency, and the State established DOE as the responsible party for remedial action and the Environmental Protection Agency as the lead agency for regulation of cleanup. The Environmental Protection Agency shares its decision-making authority with the State of Utah.

Uranium Mill Tailings Remedial Action Groundwater Project

The Uranium Mill Tailings Remedial Action Groundwater Project is carrying out additional characterization and compliance efforts not covered by the Uranium Mill Tailings Remedial Action Subsurface Project, at 22 designated uranium mill tailings sites. The project was initially authorized by Public Law 95-604. Each mill tailings site is a groundwater release site. Public Law 100-616 authorized groundwater compliance activities for an unlimited period of time. Where active remedial action is required, the Department will pay 90 percent of the costs; the States will pay ten percent. The Department is responsible for the entire cost of the remedial action for sites on Indian lands. Key activities initiated in FY 1999 were active groundwater compliance activities at the Tuba City and Monument Valley, Arizona, sites and completion of four release sites (Mexican Hat, Utah; two in Rifle, Colorado; and Grand Junction); completion of one alternate water supply at Monument Valley; initiation of a field investigation at Naturita, Colorado; and completion of a field investigation at Shiprock, New Mexico. Key activities in FY 2000 were the continuation of groundwater compliance activities at the Shiprock, New Mexico, site and continue groundwater compliance activities at the Tuba City and Monument Valley, Arizona, sites.

Moab

The Atlas Moab Site is a Title II site as currently authorized by the Uranium Mill Tailings Radiation Control Act, i.e., the licensee is currently responsible for cleanup of the site. In late 1998, the Atlas Corporation, the former licensee, declared bankruptcy. The Nuclear Regulatory Commission appointed a trustee, PricewaterhouseCoopers, in December 1999. The site and most of the assets associated with the site have been transferred to the trustee, and currently the trustee has the responsibility for site cleanup. On January 14, 2000, the Secretary of Energy proposed that Congress provide authority for DOE to clean up the site under Title I of the Uranium Mill Tailings Radiation Control Act. In October 2000, the FY 2001 National Defense Authorization Act provided the necessary authority to DOE to cleanup the site.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Idaho site is managed through an incentivized integrated management and operating contract, with fixed-price subcontracts and the Albuquerque site is managed through a performance based management and operating contract, both to ensure the most cost-effective services to the government. At Idaho, contract performance is driven and measured through the Performance Evaluation Management Plan process which updates, annually, the performance requirements by defining 5-year critical outcomes, 1 to 3-year performance objectives, and current year performance criteria. The percentage of incentivized measures is increased each year. The scope planned for FY 2002 provides for the Settlement Agreement with the State of Idaho and other compliance challenges associated with applicable requirements, while also maintaining the capability of the Idaho National Engineering and Environmental Laboratory to meet DOE mission objectives. Funds requested are appropriate to perform activities based on historical cost and engineering estimates.

ID-GJ-104 / Monticello Projects 20,918 9,067 1,000

This project provides remediation and restoration of the mill site, cleanup of vicinity and peripheral properties, and surface and groundwater cleanup.

- **#** Continue Operable Unit III interim remedial action and annual monitoring.
- **#** Provide for state grants.
- **#** Comply with millsite remediation claims settlement.

Metrics			
Release Site			
Cleanups	3	0	0

Key Milestones

- **#** Operable Unit I - Complete restoration (July 2001).
- **#** Transfer of Monticello Comprehensive Environmental Response, Compensation and Liability Act site into the Long-Term Stewardship Program (September 2001).
- **#** Operable Unit I - Will draft Final Remedial Action Report for Millsite and Groundwater peripheral properties (January 2002).

(dollars in thousands)

FY 2000	FY 2001	FY 2002

ID-GJ-105 / UMTRA Groundwater 12,058 13,252 6,000

The scope of this project is to ensure protection of human health and the environment from groundwater contaminated by past uranium processing operations. Each of the 22 inactive uranium processing sites have been characterized to determine the necessary compliance strategy; no further remediation (11 sites), natural flushing (8 sites), or active remediation (3 sites). Regulatory approval is acquired for each site from the Nuclear Regulatory Commission, the strategy is implemented, and the site will be monitored for a sufficient period to ensure compliance. Baseline Risk Assessments and initial Site Observational Work Plans have been completed for most sites. Field investigations are progressing at sites requiring additional data on a priority basis.

- # Make legally required Nuclear Regulatory Commission annual fee payment.
- # Continue operations and maintenance of the Tuba City Treatment Plan.
- # Continue the Monument Valley remediation system construction.
- # Complete the remedial action system at Shiprock, New Mexico.

Metrics			
Release Site			
Cleanups	1	0	0

Key Milestones

- # Pilot testing of vanadium removal at New Rifle site (September 2001).
- # Complete Site Observational Work Plan - Naturita, Colorado (September 2001).
- # Complete Site Observational Work Plan - Slick Rock, Colorado - two sites (September 2001).
- # Will complete Site Observational Work Plan - Durango, Colorado (September 2002).
- # Will start of Naturita remedial action compliance strategy implementation (September 2002).
- # Will complete Groundwater Compliance Action Plan at Durango, Colorado (September 2002).
- # Will complete Groundwater Compliance Action Plan at Slick Rock, Colorado - two sites (September 2002).

ID-GJ-106 / Grand Junction Office All Other Projects 12,175 5,753 2,835

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This project provides for the Grand Junction Office facility decontamination and decommissioning; management of the Grand Junction Office facility (Facility Management), which will change to non-DOE ownership in FY 2001, then will only provide for rent and utilities; the Uranium Lease Management project; Waste Management/Minimization activities; the former site contract closeout, transition, and liability costs; and transition costs for the two contracts that expire in FY 2001.

- # Continue rent and utilities.
- # Continue Uranium Lease Management inspections; monitoring restoration; and hazard mitigation.
- # Continue Waste Management/Minimization; waste management minimization administration; ship hazardous waste; pollution prevention activities; and recycling costs.
- # Continue payment of Rust contract termination and retiree medical insurance contract liabilities.
- # Continue contract transition activities.

Metrics			
Release Site			
Cleanups	1	0	0
Low-Level Waste			
Disposal (m^3)	72	22	10
Facility Decommissioning			
Cleanup	17	3	0

Key Milestones

- # Transfer the Grand Junction Office site to the Long-Term Surveillance and Maintenance Program (October 2001).
- # Demolish Building 62 Bag House (September 2001).
- # Ship low-level waste, mixed low-level waste, and hazardous waste to commercial site (July 2001).
- # Demolish Building 7A (September 2001).
- # Complete transfer of the Grand Junction Office site real estate to non-DOE ownership (September 2001).
- # Uranium Lease Management - All pre-1974 sites reclaimed (Grand Junction responsibility) (September 2002).

ID-OIM-110-N / Pre-FY 2007 Surplus Facility Deactivation Project - Non-Defense	**573**	**185**	**3,745**

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This project provides for removal of spent nuclear fuel from the Materials Test Reactor canal and the Power Burst Facility. The objective of the Materials Test Reactor Fuel Removal Project is to repackage spent nuclear fuel currently stored in the Materials Test Reactor Canal and Test Reactor Area-657 Plug Storage Cells 1 and 2 (Materials Test Reactor spent nuclear fuel), transfer the fuel to the Irradiated Fuel Storage Facility at the Idaho Nuclear Technology and Engineering Center, and dry the canned fuel and place it in interim dry storage. The objective of the Power Burst Facility Fuel Removal Project is to load 2,425 spent nuclear fuel rods, currently located in the Power Burst Facility pool, into 30 storage buckets, ship the loaded buckets to the Irradiated Fuel Storage Facility, and place the fuel into interim dry storage.

- # Complete transportation and Idaho Nuclear Technology and Engineering Center preparations to transfer Materials Test Reactor spent nuclear fuel.
- # Begin and complete transfer of Materials Test Reactor spent nuclear fuel to the Irradiated Fuel Storage Facility at Idaho Nuclear Technology and Engineering Center.
- # Complete Power Burst Facility readiness to transfer spent nuclear fuel to Idaho Nuclear Technology and Engineering Center.

Metrics			
Facilities Deactivation			
During Period	0	0	1

ID-OIM-112-N / Pre-FY 2007 Idaho Engineering and Environmental Laboratory Surveillance and Maintenance - Non-Defense **1,471** **1,255** **1,335**

This project maintains the Power Burst Facility and storage basin and the Materials Test Reactor fuel storage canal in a safe, secure, and environmentally sound condition until deactivation is complete.

- # Continue to monitor and maintain each of the facilities at the Power Burst Facility and the Materials Test Reactor Canal with the goal of providing a safe working environment for the personnel working in and around the facilities, and prevent release of radioactive or hazardous materials to the environment.

ID-SNF-104-N / Constructed New Facilities - Non-Defense **15,000** **0** **0**

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Long Term Storage of Three Mile Island Fuel project (93-E-900) at the Idaho National Engineering and Environmental Laboratory will provide for interim dry storage for fuel bearing materials currently in the Test Area North Hot Shop Pool (TAN-607). The pool inventory includes Three Mile Island-2 core debris, Loss of Fluid Test fuel, and small quantities of commercial fuels. Construction of the Three Mile Island-2 Independent Spent Fuel Storage Installation at the Idaho Nuclear Technology and Engineering Center, which is approximately 25 miles from Test Area North, is complete. The Nuclear Regulatory Commission license was granted in 1999. Completion of the equipment to accomplish Three Mile Island-2 interim dry storage directly supports the Idaho Settlement Agreement.

Transport of the Three Mile Island Unit-2 spent nuclear fuel Loss of Fluid Test fuel and commercial fuels to the new dry storage facilities will be accomplished using funds requested through the Defense Environmental Restoration and Waste Management Post 2006 account under PBS ID-SNF-103, Emptied Spent Nuclear Fuel Facilities.

No FY 2002 activities planned.

ID-WM-102 / National Low-Level Waste Program	**595**	**0**	**0**

Program management activities provide for technical support to the States and compact regions, and address DOE's Greater-Than-Class-C Low-Level Waste responsibilities.

No FY 2002 activities planned.

Total, Idaho	**62,790**	**29,512**	**14,915**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
ID-GJ-104 / Monticello Projects	
# Decrease in funding reflects the FY 2001 completion of Mill-Site Operable Unit I work. . .	-8,067
ID-GJ-105 / UMTRA Groundwater	
# Decrease in funding reflects support of higher priority areas.	-7,252
ID-GJ-106 / GJO All Other Projects	
# Decrease in funding reflects completion and closeout of the Grand Junction Office site remediation activities in FY 2001.	-2,918

	FY 2002 vs. FY 2001 ($000)
ID-OIM-110-N / Pre-FY 2007 Surplus Facility Deactivation Project - Non-Defense	
# Increase in funding reflects scheduled preparation for transport of spent nuclear fuel from Power Burst Facility Storage Basin to dry storage.	3,560
ID-OIM-112-N / Pre-FY 2007 Idaho Engineering and Environmental Laboratory Surveillance and Maintenance - Non-Defense	
# No significant change.	80
Total Funding Change, Idaho	-14,597

Oakland

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site/Project Completion account, managed through the Oakland Operations Office is to plan and implement remediation and waste treatment, storage, and disposal activities at six sites and associated activities at the Oakland Operations Office. These sites include the Lawrence Berkeley National Laboratory, the Energy Technology Engineering Center, the General Electric Vallecitos Nuclear Center, the General Atomics facility, the Laboratory for Energy-Related Health Research, and the Stanford Linear Accelerator Center. The Non-Defense Environmental Management account also includes the administration of grants and program management and contracts in support of multiple sites at the Oakland Operations Office. Once the EM cleanup mission is completed, the Lawrence Berkeley National Laboratory and the Stanford Linear Accelerator Center will continue to have operating facilities under the Office of Science, while the other sites will be returned to the landowners.

Program Goal

One of the EM programmatic goals is to have cleanup completed at four of the six sites by FY 2006 and two sites in Post 2006. Other programmatic goals include ensuring operations, facilities, and contaminated sites pose no undue risk to the public, worker health, and safety; to maintain compliance with applicable environmental laws; and managing risks associated with current and prior DOE operations at these sites. All project activities associated with General Electric and the Energy Technology Engineering Center were transferred to the Non-Defense Environmental Management, Post 2006 Completion account in FY 2001 to be consistent with the current budget structure.

Program Objectives

The program objective is to assess, remediate, decontaminate, and decommission contaminated sites and facilities; characterize, treat, minimize, store, and dispose of hazardous and radioactive waste; and develop, demonstrate, test and evaluate new cleanup technologies. These program activities are conducted taking an integrated approach to assessing work and meeting schedules, while balancing risk, mortgage reduction, compliance, cost efficiencies, stakeholder input, and implementation of enhanced performance mechanisms. Financial responsibility for the newly generated waste project at the Lawrence Berkeley National Laboratory was returned to the generating DOE program in FY 2001. Cleanup at the Energy Technology Engineering Center and General Electric were extended beyond FY 2006 and all legacy waste will be characterized and

shipped off-site. Long-term surveillance and maintenance of implemented remedial actions (e.g., pump and treat facilities) will be assumed by the landlord program or landowner, as the case may be at individual sites, after cleanup and waste disposal is complete.

The Oakland Operations Office has plans for the use of innovative technologies at several of its installations. For example, a new remediation technology using water-vapor and nitrogen was chosen for cleaning the sodium loop/systems at the Energy Technology Engineering Center. This technology was selected because it was proven to be a cost-effective method for the removal of sodium and will not generate hazardous waste. Use of the innovative technology, BetaScint, at the Laboratory for Energy Related Health Research enabled the expedited analysis and characterization of native soils suspected of having strontium-90 in the southwest trenches.

Significant Accomplishments and Program Shifts

- Continued environmental restoration activities, i.e., groundwater monitoring, treatment system operation, removal actions, decontamination and decommissioning at Lawrence Berkeley National Laboratory, Stanford Linear Accelerator Center, and the Laboratory for Energy-Related Health Research to ensure compliance with the Federal Facility Agreements and state orders and continue to meet commitments in the EM sites' baseline planning data (FY 2000).
- Completed decontamination and decommissioning of Hot Cell and associated yard cleanup at the General Atomics Site (FY 2000).
- Continued storage, treatment, and some off-site disposal of waste (low-level, mixed low-level, and transuranic) at the Lawrence Berkeley National Laboratory and the Laboratory for Energy-Related Health Research (FY 2000).
- Completed preparation of transition plan and continued implementation of DOE Order 435.1 at the Lawrence Berkeley National Laboratory (FY 2000).
- Continue storage, treatment, and off-site disposal of waste (low-level, mixed low-level, and transuranic) at the Laboratory for Energy-Related Health (FY 2001).
- Complete workplans and begin removal action for the Western Dog Pen Areas and Domestic Septic Tank (Number 6) at the Laboratory for Energy-Related Health Research (FY 2001).
- Complete EM mission and begin surveillance and maintenance of irradiated fuel materials stored at General Atomics (FY 2001).
- Continue to reduce inventory of legacy waste at the Lawrence Berkeley National Laboratory and transfer responsibility for newly generated waste to the Office of Science (FY 2001).
- Complete Feasibility Study and pilot testing for the soil vapor extraction system at the Former Hazardous Waste Storage Area at the Stanford Linear Accelerator Center (FY 2001).

- # Continue storage, treatment and off-site disposal of waste (low-level, mixed low-level, and transuranic) at the Laboratory for Energy-Related Health (FY 2002).
- # Continue implementation of corrective measures at the Lawrence Berkeley National Laboratory in accordance with the Corrective Measures Study (FY 2002).
- # Conduct several removal actions and perform waste disposal activities at the Laboratory for Energy-Related Health (FY 2002).
- # Continue operation of the Hazardous Waste Handling Facility to treat legacy waste at the Lawrence Berkeley National Laboratory (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OK-003 / Lawrence Berkeley National Laboratory Soils and Groundwater (Environmental Restoration)	3,342	3,500	3,500
OK-005 / Stanford Linear Accelerator Center (Environmental Restoration)	1,637	1,989	2,617
OK-010 / Laboratory for Energy-Related Health Research Environmental Restoration	3,504	4,127	3,648
OK-012 / Hot Cell Facility Decontamination and Decommissioning at General Atomics	692	1,100	300
OK-014 / Laboratory for Energy-Related Health Research Waste Management	679	2,235	2,245
OK-015 / Lawrence Berkeley National Laboratory Legacy Waste	1,092	630	1,450
OK-040 / Program Management and State Grants	3,281	1,115	90
Total, Oakland	14,227	14,696	13,850

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
General Atomics (CA)	692	1,100	300	-800	-72.7%
Lawrence Berkeley National Laboratory (CA)	4,434	4,130	4,950	820	19.9%
Oakland Operations Office (CA)	3,281	1,115	90	-1,025	-91.9%
Stanford Linear Accelerator Center (CA)	1,637	1,989	2,617	628	31.6%
U.C. Davis / Laboratory for Energy-Related Health Research (CA)	4,183	6,362	5,893	-469	-7.4%
Total, Oakland	14,227	14,696	13,850	-846	-5.8%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Release Site			
Cleanups	5	9	22
Facilities Decommissioning			
Cleanup	3	0	0
Mixed Low-Level Waste			
Disposal (m^3)	7	1	1
Treatment (m^3)	2	0	0
Low Level Waste			
Disposal (m^3)	297	118	12

Site Description

Lawrence Berkeley National Laboratory

The 200-acre Lawrence Berkeley National Laboratory site is located adjacent to the University of California in Berkeley, California. Remediation activities at the Laboratory focus on characterization and remediation of contaminated soil and groundwater. Currently, there are 163 release sites and one facility on-site, in the environmental restoration program. The waste management activities provide compliant storage, treatment, and off-site disposal of both legacy and currently generated hazardous and radioactive waste. Disposal of a backlog of non-compactible low-level waste to Hanford began in FY 1999. The financial responsibility for the newly generated waste project was transferred to the generating DOE program (Office of Science) in FY 2001.

General Atomics

The General Atomics site is privately-owned, operated, and located near San Diego, California. General Atomics has maintained and operated a Hot Cell Facility for over 30 years to conduct both government and commercially funded nuclear research and development. Department of Energy cleanup efforts are focused on cleanup of the Hot Cell Facility and surrounding contaminated soils. The General Atomics Hot Cell project is comprised of one facility and two release sites, all of which were completed in FY 2000. Cleanup activities will be finalized with the disposal of on-site contaminated soil in FY 2001. Surveillance and maintenance of the irradiated fuel materials that will continue to be in interim storage on site until 2005, when it will be shipped to the Idaho National Environmental and Engineering Laboratory.

Laboratory for Energy-Related Health Research

The Laboratory for Energy-Related Health Research site is located at the University of California, Davis. Research at the laboratory originally focused on the health effects from chronic exposure to radionuclides using animal subjects to simulate radiation effects on humans. The Department terminated the research program and closed the laboratory in 1988. Environmental restoration activities are directed toward cleaning up DOE areas of site contamination for release to the University of California, Davis. The Laboratory for Energy-Related Health Research site is comprised of 17 release sites and 8 facilities. The majority of waste characterization and off-site disposal and EM mission will be completed by FY 2004. However, there will be the need for participation in post closure review, as directed by the Comprehensive Environmental Response, Compensation, and Liability Act, that continues until FY 2006.

Stanford Linear Accelerator Center

The Stanford Linear Accelerator Center site is a 426-acre site located near Stanford University in California. It is managed for DOE by Stanford University where theoretical research in high-energy particle physics is conducted. Remediation efforts focus on the cleanup of polychlorinated biphenyls contaminated soil sites and several solvent contaminated groundwater and soil sites. The Stanford Linear Accelerator Center site currently has 23 release sites. Responsibility for waste management activities was transferred to the Office of Science, the generating DOE program, in FY 1998.

Oakland Operations Office

The Oakland Operations Office and the State of California have agreed to a statement of work for grant funds. Oakland Operations Office awards and manages grants provided to the state for oversight activities which include, participation in meetings, review of documents, and involvement with the public. In addition, grant related activities such as tribal college and universities, hispanic scholarships, and independent reviews are managed and funded by the Oakland Operations Office. The operations office is responsible for the management and funding of contracts that provide the multiple sites with overall: program management support; waste management treatment and disposal; and technological support to accelerate program mission and cleanup.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Lawrence Berkeley National Laboratory and the Stanford Linear Accelerator Center sites are managed through performance based management and operating contracts to assure the most cost-effective services to the government. The Laboratory for Energy-Related Health Research and Energy Technology Engineering Center sites are managed through cost and performance incentivized contracts. The scope planned for FY 2002 at these sites has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. The project work at these sites have had an independent cost review of the scope (e.g. the Corps of Engineers and Oakland's in-house non-programmatic cost estimating staff have reviewed the Energy Technology Engineering Center scope and the Laboratory for Energy-Related Health Research scope and cost). The funds requested for FY 2002 for these sites are appropriate to perform the activities based on historical level of effort costs.

OK-003 / Lawrence Berkeley National Laboratory Soils and Groundwater (Environmental Restoration) 3,342 3,500 3,500

The mission of this project is to investigate and cleanup all releases of hazardous and/or radioactive waste in soil and groundwater that may have occurred at the site. These areas have been identified as release sites. All remediation activities will be conducted using Resource Conservation and Recovery Act guidance and other applicable federal and state regulations.

- # Continue monitoring, maintenance, and operations of groundwater treatment systems and prepare regulatorily required quarterly reports.
- # Complete sampling activities and data validation for tritium sampling and hazardous ranking re-scoring.
- # Complete bench scale and pilot scale studies under the corrective measures study phase.

Metrics			
Release Site			
Cleanups	3	0	14

Key Milestones

- # Complete risk assessment (June 2001).
- # Complete corrective measures studies (September 2002).

(dollars in thousands)

FY 2000	FY 2001	FY 2002

OK-005 / Stanford Linear Accelerator Center (Environmental Restoration) 1,637 1,989 2,617

The mission of this project is to clean up contaminated soils and groundwater using Comprehensive Environmental Response, Compensation and Liability Act technical guidance. The Stanford Linear Accelerator Center is an operating facility which is being operated by Stanford University under a contract with DOE to conduct theoretical research in high-energy particle physics. The Department is responsible for the long-term stewardship of the groundwater monitoring system(s) and maintenance and operation of any required hydraulic containment systems beyond FY 2003.

- **#** Submit final assessment report for Former Hazardous Waste Storage Area remediation to regulators.
- **#** Submit final assessment report for plating shop cleanup to regulators.
- **#** Continue remediation of soils at Substation 501, 504, and 512; IR-6 Drainage Channel; and 5.8 MegaWatt Power Supply.

Metrics			
Release Site Cleanups	1	3	1
Key Milestones			
# Submit to Regulators Final Report 1.0/1.5 MegaWatt Power Supply Removal (February 2001).			
# Complete Former Solvent Underground Storage Tank pilot test (July 2001).			
# Complete IR-6/8 risk assessment (August 2001).			
# Submit to regulators final report on Substation 505/Collider Injunction (September 2001).			
# Submit final plan substation 501 to regulators (November 2001).			
# Submit final plan substation 504 to regulators (November 2001).			
# Submit final plan substation 512 to regulators (November 2001).			
# Submit remedial investigation/feasibility study report plating shop to regulators (April 2002).			
# Submit remedial investigation/feasibility study report for the Former Hazardous Waste Storage Area to regulators (July 2002).			

(dollars in thousands)

FY 2000	FY 2001	FY 2002

OK-010 / Laboratory for Energy-Related Health Research
Environmental Restoration 3,504 4,127 3,648

This project accomplishes: 1) decontamination and decommissioning of radioactive and chemically contaminated facilities; 2) removal of on-site radioactive sources; 3) remediation and/or removal of soil contamination at Southwest Trenches, radium and strontium treatment systems, domestic septic tanks, and outdoor dog pens (Western and Eastern Dog Pens) burial areas, leach fields; 4) closure or removal of underground tanks; 5) verification of cleanup completion; and 6) post closure monitoring as required by the Comprehensive Environmental Response, Compensation and Liability Act for National Priority List sites. The cleaned facilities and land will be returned to the University of California, Davis for future use.

Conduct assessment of remaining Domestic Septic Systems 1, 4, 5, and 7.

Complete the Domestic Tanks (3 and 6) Removal Action activities.

Continue Western Dog Pen remedial action.

Metrics			
Release Site			
Cleanups	0	6	7
Key Milestones			
# Complete Sr leach field and piping system remedial action (September 2001).			

OK-012 / Hot Cell Facility Decontamination and
Decommissioning at General Atomics 692 1,100 300

The mission of this project is to remove radiological and chemical contamination from the Hot Cell Facility leading to the regulatory release of the site to the landowner for future use.

Continue on-site surveillance and maintenance of the irradiated fuel materials.

Metrics			
Release Site			
Cleanups	1	0	0
Mixed Low-Level Waste			
Disposal (m^3)	1	0	0
Treatment (m^3)	1	0	0
Key Milestones			
# Dispose of the additional 50,000 Ft^3 of Project Generated Waste (August 2001).			

(dollars in thousands)

FY 2000	FY 2001	FY 2002

OK-014 / Laboratory for Energy-Related Health Research

Waste Management	**679**	**2,235**	**2,245**

The mission of this project is to characterize, treat, transfer and/or dispose of remaining environmental restoration waste.

Continue to characterize, store, designate, profile, transport and dispose of remediation waste from the Radium-226 and Imhoft treatment systems, domestic septic tanks, and dog pen removal action waste.

Metrics			
Mixed Low-Level Waste			
Disposal (m^3)	0	1	1
Low-Level Waste			
Disposal (m^3)	180	110	2
Key Milestones			
# Complete disposal from dry wells and associated leach trenches (March 2001).			

OK-015 / Lawrence Berkeley National Laboratory Legacy

Waste	**1,092**	**630**	**1,450**

The mission of this project is to reduce inventories of previously generated low-level radioactive waste that has been generated by DOE programs at Lawrence Berkeley National Laboratory for which the Environmental Management program is responsible. Activities in this project support the treatment, storage, and disposition of legacy waste.

Continue operation of the Hazardous Waste Handling Facility for processing legacy waste.

Provides for the sampling of legacy waste as needed to certify waste and prepare shipments.

Includes cost of certified staff for oversight of legacy waste project and cost of waste shipments.

Metrics			
Low-Level Waste			
Disposal (m^3)	28	8	10
Key Milestones			
# Ship 30 cubic meters of legacy waste (September 2001).			

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OK-040 / Program Management/Grants	**3,281**	**1,115**	**90**

This project provides funding for the Oakland Operations Office to support and manage state grants and Oakland multiple site waste management and program support contracts.

Award funds to the San Francisco Regional Water Quality Control Board for the Lawrence Berkeley National Laboratory and the Stanford Linear Accelerator Center site grant.

Continue to process integrated program support and waste treat and disposal contracts.

Total, Oakland	**14,227**	**14,696**	**13,850**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
OK-005 / Stanford Linear Accelerator Center (Environmental Restoration)	
# Increase in funding reflects some acceleration of soil remediation projects.	628
OK-010 / Laboratory for Energy-Related Health Research Environmental Restoration	
# Decrease in funding reflects slow down of remediation activities to accomodate waste management activities at the Laboratory for Energy-Related Health Research.	-479
OK-012 / Hot Cell Facility Decontamination and Decommissioning at General Atomics	
# Decrease in funding due to completing EM mission at General Atomics in FY 2001, with only surveillance of irradiated fuel remaining until shipment schedule in FY 2003.	-800
OK-014 / Laboratory for Energy-Related Health Research Waste Management	
# No significant increase.	10
OK-015 / Lawrence Berkeley National Laboratory Legacy Waste	
# Increase in funding reflects need to perform more complex analysis and additional resources to fully characterize waste for treatment and disposal.	820
OK-040 / Program Management and State Grants	
# Decrease in funding reflects the annual Oakland Operations Office contract for waste disposal for its multiple sites, not yet negotiated.	-1,025
Total Funding Change, Oakland	-846

Hanford Site - Richland Operations Office

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Site/Project Completion account, managed by the Richland Operations Office, is cleanout and surveillance and maintenance activities for buildings formerly used for DOE/Office of Nuclear Energy research and development.

Program Goal

The goal is to transition the former Office of Nuclear Energy facilities to safe, compliant, long-term, economic, interim condition pending ultimate disposition.

Program Objective

The objective is to perform cleanout and stabilization activities to put these facilities into a low-cost surveillance and maintenance condition as soon as possible.

Significant Accomplishments and Program Shifts

- Accomplishments included completion of cleaning the sodium potassium (NaK) from a cold trap and its cooling loop in the 337 High Bay facility and cleanout of the sodium residuals from 3 small tanks; completing cleanout and stabilization of 309 Building C-Cell, downgrading the area to a Fixed Contamination Area from a Contamination Area; and completed cleanup of the ion exchange columns from the tank farm (FY 2000/RL-RC03).
- Planned activities include shipping a sodium filled cold trap to an off-site disposal facility, internal inspection of the Composite Reactor, and resuming deactivation activities. Place the 309 Building in an appropriate condition for an interim surveillance and maintenance phase by securing the heating and ventilation system, shutdown the exhaust stack, cleanout of the fuel transfer pit, and completing roof repairs (FY 2001/RL-RC03).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
RL-RC03 / Advanced Reactors Transition	1,380	1,485	1,485
Total, Richland	1,380	1,485	1,485

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Hanford	1,380	1,485	1,485	0	0.0%
Total, Richland	1,380	1,485	1,485	0	0.0%

Metrics Summary

	FY 2000	FY 2001	FY 2002
The project in the Detailed Program Justification has associated metrics; however, no metrics are reportable in the 3-year budget profile.			

Site Description

Richland Operations Office--Hanford Site

The Richland Operations Office manages the Hanford site, which is located on 560 square miles (1,450 square kilometers) in southeastern Washington. Hanford was among the first facilities constructed by the Manhattan Project for the production of plutonium for national defense. Historically, the Hanford mission was plutonium production, reactor and processing operations, and research related to advanced reactors, energy technologies, and basic sciences. All production activities ceased in 1989, leaving a legacy of significant quantities of hazardous and nuclear waste.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

To support the site's missions, EM negotiated an extension of the current site operations contract through FY 2006 for transition work in the Central Plateau and the Spent Nuclear Fuel Project. The contract extension is performance based with 80 percent of the fee applied to the completion of specific cleanup activities and 20 percent of the fee applied to a comprehensive performance incentive. During the six-year performance period, the contractor is paid more fee for meeting multi-year performance objectives. Incremental progress and provisional fee payments will be provided to the contractor toward final completion of contract goals. A significant portion of the available fee is for stretch performance incentives, which requires the contractor to accelerate work by achieving cost and schedule efficiencies. For the restoration of the River Corridor, a closure contract is planned to be in-place by June 2002 with attributes similar to the Rocky Flats and Fernald contracts.

RL-RC03 / Advanced Reactor Transition	**1,380**	**1,485**	**1,485**

The Advanced Reactor Transition maintains and performs deactivation of the Nuclear Energy Legacy Facilities and the 309 Building/Plutonium Recycle Test Reactor. Deactivation activities reduces Hanford site mortgage associated with surplus facilities and contributes to economic transition The Plutonium Recycle Test Reactor 309, 335, 337, and 3718M Buildings activities include the surveillance and operation of these facilities according to all appropriate radiological orders. The deactivation/compliance activities prepare each building for long-term surveillance and maintenance pending decontamination and decommissioning.

Continue the nuclear energy legacies deactivation activities.

Total, Richland	**1,380**	**1,485**	**1,485**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
RL-RC03 / Advanced Reactors Transition	
# No significant change	0
Total Funding Change, Richland	0

Post 2006 Completion

Program Mission

The Non-Defense Environmental Management, Post 2006 Completion account, includes projects currently planned to require funding beyond 2006. Within the Non-Defense Environmental Management appropriation, this account includes projects at the Grand Junction Site in Colorado, the Los Alamos National Laboratory in New Mexico, the Energy Technology Engineering Center and General Electric sites in California, the West Valley Demonstration Project in New York, and the packaging certification program at Headquarters.

After completion of cleanup, it will be necessary for the EM program to maintain a presence at some sites to monitor, maintain, and provide information on the contained residual contamination. These activities will be necessary to ensure the reduction of risk to human health is maintained. Such stewardship will include passive or active controls, and often, treatment of groundwater over a long period of time. The extent of long-term stewardship required at a site will reflect the end-state developed in consultation among the U.S. Department of Energy, Congress, Tribal Nations, representatives of regulatory agencies and State and local authorities, representatives of non-governmental organizations, and interested members of the general public.

Program Goal

Accelerating cleanup and project completion are central goals of the EM program. Environmental Management sites are working to reduce outyear costs by completing projects as soon and as efficiently as possible. For those sites in the Post 2006 Completion account, treatment will continue for the remaining "legacy" waste streams.

Program Objectives

- Address the environmental risks across the Department of Energy complex and ensure that facilities and activities pose no undue risks to the public and worker safety and health.
- Continue surveillance and maintenance of facilities.
- Work aggressively with stakeholders and regulators to address the compliance challenges faced by the EM program.

Performance Measures

One way EM is ensuring success is to establish and manage based on sound performance measures. The EM program has been actively incorporating the requirements of the Government Performance and Results Act into its planning, budgeting, and management systems. At the programmatic level, these requirements are reflected in "corporate" performance measure and key milestone reporting and tracking. The EM management uses the corporate performance measures along with other site-specific and project-specific objectives on an annual basis to ensure that progress is being made toward EM's goal of site closure and project completion.

The chart below contains a summary of EM corporate performance measures for this program account. Detailed performance measure information can be found in the site details that follow this program overview.

EM Corporate Performance Measures [a] [b]

	FY 2000 Actuals	FY 2001 Estimate	FY 2002 Estimate	Life-cycle
Non-Defense Post 2006 Completion				
Number of Release Site Completions	0	0	0	10
Number of Facilities Decommissioned	3	2	0	32
Number of Facilities Deactivated	0	1	0	7
Number of High-Level Waste Canisters Produced	10	5	0	256
Volume of Transuranic Waste Shipped to WIPP for Disposal (m^3)	0	2	9	TBD
Volume of Mixed Low-Level Waste Treated (m^3)	144	5	60	333
Volume of Mixed Low-Level Waste Disposed (m^3)	9	11	7	71
Volume of Low-Level Waste Disposed (m^3)	954	1,415	700	7,380

Significant Accomplishments and Program Shifts

The FY 2002 request reflects EM's project-oriented structure as a key component of the effort to accelerate cleanup and reduce costs. All EM activities are organized into projects which have a defined scope, schedule, cost, and end state. Specific accomplishments and program shifts may be found in the site details that follow this overview section.

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[a] Life-cycle estimates for release sites, facilities, and high-level waste canisters include pre-1997 actuals. Waste type, nuclear materials, and spent nuclear fuel estimates are from fiscal years 1998 through 2070. In most instances, life-cycle refers to 1997-2070.

[b] This chart provides a consistent set of performance measures for the total EM program. The more detailed project-level justification provides a description of significant activities for each project including project-specific milestones, as applicable.

Funding Profile

(dollars in thousands)

	FY 2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Post-2006 Completion	129,278	137,744	-2,141	135,603	120,053
Total, Non-Defense Post-2006 Completion	129,278	137,744	-2,141	135,603	120,053

Public Law Authorization:

Public Law 95-91, “Department of Energy Organization Act (1977)”

Public Law 96-368, “West Valley Demonstration Project Act of 1980"

Public Law 100-616, “Uranium Mill Tailings Remedial Action Amendments Acts of 1988"

Public Law 103-62, “Government Performance and Results Act of 1993"

Public Law 106-377, “The Energy and Water Development Appropriations Act, 2001"

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Albuquerque Operations Office	5,138	3,850	2,500	-1,350	-35.1%
Idaho Operations Office	0	5,052	5,415	363	7.2%
Multi-Site	3,501	3,544	3,544	0	0.0%
Oakland Operations Office	15,562	17,571	13,479	-4,092	-23.3%
Ohio Field Office	105,077	105,586	95,115	-10,471	-9.9%
Total, Non-Defense Post-2006 Completion	129,278	135,603	120,053	-15,550	-11.5%

Albuquerque

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Post 2006 Completion account, carried out by the Albuquerque Operations Office, is to support a portion of the activities at the Los Alamos National Laboratory in New Mexico; specifically, the recovery of radioactive sealed sources from the public and private sectors.

Program Goal

The Los Alamos National Laboratory has been designated as the lead laboratory for planning and operations for the recovery and disposition of unwanted radioactive sealed sources, from both the public and private sectors, which have no previous or current disposition options. In this capacity, the Los Alamos National Laboratory provides solutions to complex-wide technical and operational issues associated with stabilization and storage of plutonium and other nuclear materials.

Program Objectives

The objective of the Off-site Source Recovery Program is to establish compliance with the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Public Law 99-240) with respect to unwanted radioactive sealed sources, which under the Act, are made a Department of Energy responsibility. A further objective of this program is to remove these unwanted radioactive sources from the private and public sectors as expeditiously as possible. This effort will reduce potential risk to the public health and safety, and the environment by the systematic recovery of these sources for acceptance at the Los Alamos National Laboratory, where they can be consolidated and safely stored until a final disposition path is identified.

Significant Accomplishments and Program Shifts

- Emphasized more aggressive recovery of radioactive sealed sources from the private sector to reduce risk. Safe compliant storage developed to permit access to stored materials for reuse/recycle if a need arises and/or disposition directly to disposal when a site becomes available. Key accomplishments included:
  - About 100 neutron sources currently at the Los Alamos National Laboratory will be consolidated for storage in prototype multi-function containers (FY 2001).
- Recovered, through commercial contractors, 31 sources and provided compliant storage (FY 2000).

- # Initiate recovery operations at custodian's site for excess Pu-238 Pacemakers (FY 2001).
- # Re-package approximately 100 sealed sources for on-site storage in drums (approximately 15 drums). The sources will be characterized and packaged to meet the Waste Isolation Pilot Plant Waste Acceptance Criteria (FY 2001).
- # Recover from off-site and store 2,300 sealed sources (FY 2001).
- # Continue consolidation plan with portable gauge manufacturers for excess Am-241/Be/Cs-137 and Am-241/Be sources (FY 2001).
- # Initiate establishment of performance objectives for disposal of <500 cubic meters of sealed sources in multi-function containers (FY 2001).
- # Prepare the DOE's performance objectives for Greater-than-Class-C Low-Level Waste for review by the Nuclear Regulatory Commission (FY 2002).
- # Recover from off-site and store 1,000 sealed sources (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
AL-032 / Off-site Source Recovery Program - Non-Defense	5,138	3,850	2,500
Total, Albuquerque	5,138	3,850	2,500

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Los Alamos National Laboratory	5,138	3,850	2,500	-1,350	-35.1%
Total, Albuquerque	5,138	3,850	2,500	-1,350	-35.1%

Metrics Summary

	FY 2000	FY 2001	FY 2002
The project in the Detailed Program Justification has associated metrics; however, no metrics are reportable in the 3-year budget profile.			

Site Description

Los Alamos National Laboratory

The Los Alamos National Laboratory encompasses over 43 square miles in northern New Mexico, and conducts major programs in multiple areas including: applied research in nuclear and conventional weapons in development, nuclear fission and fusion, nuclear safeguards and security, and environmental and energy research. The waste produced includes low-level, mixed, hazardous, transuranic, sanitary waste streams, and small amounts of other waste from research. The primary waste management activities include storage, treatment, and disposal of waste.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Los Alamos National Laboratory is managed through a performance, based management, and operating contract to assure the most cost-effective services to the Government. The scope planned for FY 2002 has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. The funds requested for FY 2002 are appropriate to perform the activities based upon an internal cost review of this project and a review of similar projects that have undergone independent reviews at this facility.

AL032/Off-site Source Recovery Program - Non-Defense . . 5,138 3,850 2,500

The purpose of this program is to establish compliance with Public Law 99-240 with respect to the Department of Energy's responsibility for acceptance and disposition of unwanted radioactive sealed source devices and material covered by Section 3(b)(1) Paragraph (D) of the Act. Establishment of this program fulfills the Department of Energy's obligation described in the "Recommendations for Management of Greater-than-Class-C Low-Level Radioactive Waste, Report to Congress in response to Public Law 99-240" (February 1987) (DOE/NE-0077) with respect to radioactive sealed sources.

- # Prepare the DOE's Performance Objectives for Greater-than-Class C Low-Level Waste for review by the Nuclear Regulatory Commission.
- # Recover from off-site and store 1,000 sealed sources.

Key Milestones
Recover 2,300 Sealed Sources (September 2001).

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
Total, Albuquerque	**5,138**	**3,850**	**2,500**

Explanation of Funding Changes From FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
AL-032 /Off-site Source Recovery Program - Non-Defense	
# Decrease in funding reflects transfer of funds to higher priority activities.	-1,350
Total Funding Change, Albuquerque	-1,350

Idaho

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Post 2006 Completion account, carried out by the Idaho Operations Office, is to support the Long-Term Surveillance and Maintenance Program at the Grand Junction Office.

Program Goal

The Long-Term Surveillance and Maintenance Program at the Grand Junction Office is responsible for the long-term custody and care of ultimately more than 50 disposal sites and will continue indefinitely.

Program Objectives

The objective of the Long-Term Surveillance and Maintenance Program provides long-term surveillance, environmental monitoring, maintenance, site security, and annual reporting.

Significant Accomplishments and Program Shifts

- Program Shift: Transfer oversight of the Long-Term Surveillance and Maintenance Program at the Grand Junction Office from the Albuquerque Operations Office to the Idaho Operations Office (FY 2002).
- Provide for long-term surveillance, environmental monitoring, maintenance, site security, annual reporting, and emergency response for transferred Uranium Mill Tailings Remedial Control act Title I and Title II, Nuclear Waste Policy Act Section 151 (c), and Decontamination and Decommissioning sites; transfer up to nine additional sites into the program, including Uranium Mill Tailings Radiation Control Act Title II sites, and the Grand Junction Office site (FY 2001/ID-GJ-103, formerly AL-031).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
ID-GJ-103 / Long-Term Surveillance and Maintenance Program	0	5,052	5,415
Total, Idaho	0	5,052	5,415

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Grand Junction	0	5,052	5,415	363	7.2%
Total, Idaho	0	5,052	5,415	363	7.2%

Metrics Summary

	FY 2000	FY 2001	FY 2002
The projects in the Detailed Program Justification has associated metrics; however, no metrics are reportable in the 3-year budget profile.			

Site Description

Grand Junction

The Grand Junction Office is located immediately south of the City of Grand Junction, Colorado, on a 57 acre site adjacent to the Gunnison River. The Grand Junction Office's primary mission is the closure of small sites and the long-term surveillance and maintenance of completed sites. Current Grand Junction Office project assignments include the Monticello millsite and vicinity properties cleanup, the Grand Junction Office Remedial Action Project, the Long-Term Surveillance and Maintenance Program, the Uranium Leasing Program, the Grand Junction Office Waste Management and Landlord Programs, the Pinellas Environmental Restoration Program, the Maxey Flats Program, and the Uranium Mill Tailings Remedial Action Groundwater Project. The Grand Junction Office is responsible for 44 release sites and 44 facilities of which the Uranium Mill Tailings Remedial Action Groundwater Project consists of 22 release sites.

The cleanup of uranium mill site at the Moab, Utah, as authorized by Congress in FY 2001, also has been assigned to the Grand Junction Office.

The Long-Term Surveillance and Maintenance Program conducts stewardship activities for 25 sites. For each site, the Long-Term Surveillance and Maintenance Program ensures that the on-site contaminated materials remain isolated from the environment, that the safety of the public and the environment is maintained, and that all applicable regulations are met. Program scientists, engineers, and specialists conduct inspections, provide maintenance, monitor performance, perform research, and archive records.

Detailed Program Justification

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
ID-GJ-103/Long-Term Surveillance and Maintenance Program	**0**	**5,052**	**5,415**

This program is responsible for the long-term custody and care of transferred disposal sites from the Albuquerque Operations Office and other EM program sites.

- # Continue annual surveillance and maintenance of Uranium Mill Tailings Radiation Control Act Title I and Title II sites; the Nuclear Waste Policy Act Section 151 (c) site; and Decontamination and Decommissioning Program sites.
- # Accept new sites into the Program as they are completed and approved for transfer by regulatory authorities. This includes the preparation of long-term surveillance plans for approval by the regulators at most sites.
- # Continue operation of the Chaney disposal cell near Grand Junction, Colorado to accept residual radioactive materials under the Long-Term Radon Management Program.
- # Reimburse the Nuclear Regulatory Commission for their licensing and oversight activities for Long-Term Surveillance and Maintenance program sites as required by law.

Key Milestones
FY 2001 inspections, maintenance, and inspection reports for approximately 30 disposal sites (September 2001).
FY 2002 inspection, maintenance, and inspection reports for approximately 40 disposal sites (September 2002).

Total, Idaho	**0**	**5,052**	**5,415**

Explanation of Funding Changes From FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
ID-GJ-103 / Long-Term Surveillance and Maintenance Program	
# Increase in funding reflects new site activities (such as long-term maintenance and surveillance).	363

Total Funding Change, Idaho	363

Oakland

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Post 2006 Completion account, managed through the Oakland Operations Office is to plan and implement remediation and waste treatment, storage, and disposal activities at two sites. These sites include the Energy Technology Engineering Center, and the General Electric Vallecitos Nuclear Center. These two sites will be returned to the landowners upon completion of cleanup work. The Non-Defense account also includes the management and administration of grants, program management, and management of contracts in support of multiple sites at the Oakland Operations Office.

Program Goal

Environmental Management's programmatic goals include ensuring operations, facilities and contaminated sites pose no undue risk to the public, worker health and safety; maintaining compliance with applicable environmental laws; and managing risks associated with current and prior DOE operations.

Program Objectives

The principle program objective is to assess, remediate, decontaminate and decommission contaminated sites and facilities; characterize, treat, minimize, store, and dispose of hazardous and radioactive waste; and develop, demonstrate, test and evaluate new cleanup technologies. These program activities are conducted taking an integrated approach to assessing work and meeting schedules, while balancing risk, mortgage reduction, compliance, cost efficiencies, stakeholder input, and implementation of enhanced performance mechanisms. Cleanup at the Energy Technology Engineering Center and General Electric will extend beyond FY 2006 and all legacy waste is currently scheduled for completion and shipped off-site once cleanup is complete. Long-term surveillance and maintenance of implemented remedial actions at the Energy Technology Engineering Center (e.g., pump and treat facilities) will be assumed by the land owners after cleanup and waste disposal is complete.

The Oakland Operations Office has plans for the use of innovative technologies at several of its installations. For example, a new remediation technology using water-vapor and nitrogen was chosen for cleaning the sodium loop/systems at the Energy Technology Engineering Center. This technology was selected because it was proven to be a cost-effective method for the removal of sodium and will not generate hazardous waste.

Significant Accomplishments and Program Shifts

- Excavated and stored chemically contaminated soil on-site from the Former Sodium Disposal Facility at the Energy Technology Engineering Center (FY 2000).
- Complete interim removal action at the sodium disposal facility and remove sodium from small component test installation at the Energy Technology Engineering Center (FY 2001).
- Continue landlord activities (i.e., general and administrative support, rent) and sodium disposal at the Energy Technology Engineering Center (FY 2001).
- Complete implementation of DOE Order 435.1 and shipment of low-level and mixed low-level waste at the Energy Technology Engineering Center (FY 2001).
- Continue operations of groundwater extraction systems, development of corrective measures study, and treatment and disposal of waste at the Energy Technology Engineering Center (FY 2002).
- Negotiate cost shared contract with General Electric (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OK-007 / ETEC Remediation	8,810	9,300	5,000
OK-009 / ETEC Landlord	4,933	4,500	4,805
OK-013 / General Electric D&D (Environmental Restoration)	0	61	100
OK-040LT / Program Management and State Grants (Post 2006)	10	10	10
OK-041ND / Advance Waste Treatment and Environmental Technologies (Non-Defense)	0	500	64
OK-042 / ETEC Waste Management	1,809	3,200	3,500
Total, Oakland	15,562	17,571	13,479

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
General Electric	0	61	100	39	63.9%
Energy Technology Engineering Center	15,552	17,000	13,305	-3,695	-21.7%
Oakland Operations Office	10	510	74	-436	-85.5%
Total, Oakland	15,562	17,571	13,479	-4,092	-23.3%

Metrics Summary

	FY 2000	FY 2001	FY 2002
Facilities Deactivation			
During Period	0	1	0
Facilities Decommissioning			
Cleanup	3	2	0
Mixed Low-Level Waste			
Treatment (m^3)	13	0	0
Disposal (m^3)	9	11	7
Transuranic Waste			
Shipped to Waste Isolation Pilot Plant	0	2	9

Site Description

Energy Technology Engineering Center

The Energy Technology Engineering Center is a DOE facility located on 90 acres of land leased from Boeing North America Corporation in Simi Valley, California. The environmental restoration activities at the Energy Technology Engineering Center are to remediate contaminated groundwater, complete decontamination and decommissioning of several remaining radiological facilities, deactivate and clean up existing sodium facilities, provide landlord functions, and perform waste characterization and off-site disposal.

General Electric

The General Electric site is a privately-owned site located near Pleasanton, California. Activities are focused on cleanup of a High-Level Alpha Hot Cell and a glove box enclosure. In FY 2002, plans are to negotiate a cost-shared contract with General Electric. The General Electric site is comprised of two facilities. Once facility cleanup is completed it will be returned to the landowners for future use.

Oakland Operations Office

The Oakland Operations Office and the State of California have agreed to a statement of work for grant funds. The Oakland Operations Office awards and manages grants provided to the state for oversight activities which include, participation in meetings, review of documents, and involvement with the public. In addition, grant related activities such as tribal colleges and universities, Hispanic scholarships, and independent reviews are managed and funded by the Oakland Operations Office. The Oakland Operations Office is also responsible for the management and funding of contracts that provide the multiple sites with overall: program management

support; waste management treatment and disposal; and technological support to accelerate program mission and completion.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The Energy Technology Engineering Center is managed through a cost and performance incentivized contract to assure the most cost-effective services to the government. The scope planned for FY 2002 at this site has been reviewed and is appropriate to meet the goals of the site as outlined in the EM sites' baseline planning data. The project work at the Energy Technology Engineering Center has had an independent cost review of the scope (e.g. the Corps of Engineers and Oakland's in-house non-programmatic cost estimating staff). The funds requested for FY 2002 for this site are appropriate to perform the activities based on historical level of effort costs.

OK-007 / Energy Technology Engineering Center

Remediation	**8,810**	**9,300**	**5,000**

This project involves: 1) cleanup of contaminated release sites; 2) decontamination and decommissioning of radioactive, and chemically contaminated facilities at the Energy Technology Engineering Center for eventual release to Boeing; and 3) remediation of contaminated groundwater.

- # Continue demolition of Building 4059.
- # Complete project activity re-baselining.
- # Continue operation of interim action groundwater extraction systems.
- # Continue demolition of Sodium Component-Test Installation.

Metrics			
Facilities Deactivation			
During Period	0	1	0
Facilities Decommissioning			
Cleanup	3	2	0

OK-009 / Energy Technology Engineering Center Landlord	**4,933**	**4,500**	**4,805**

(dollars in thousands)

FY 2000	FY 2001	FY 2002

This project accomplishes all infrastructure management and surveillance and maintenance activities at the Energy Technology Engineering Center. Activities include: 1) landlord general support (such as rent, environmental support, permits, security, and fire protection); and 2) surveillance and maintenance (laboratory, facilities, records, and other support services). Landlord responsibilities for the Energy Technology Engineering Center were transferred to EM in FY 1997 from Nuclear Energy.

- # Continuation of landlord activities, which includes property divestment, records retention, permitting, and maintenance of site infrastructure.

OK-013 / General Electric Decontamination and Decommissioning (Environmental Restoration) 0 61 100

This project allows for the decontamination of Hot Cell #4 located in the Radioactive Materials Laboratory in Building 102 at the General Electric Vallecitos site near Pleasanton, California. Through negotiations, issues related to cost sharing percentages between DOE and General Electric, contract pricing, and allowances for past costs will be addressed.

- # Support surveillance and maintenance of DOE facilities.
- # Negotiate cost shared arrangement with General Electric and if successful award contract to clean up hot cell.

Key Milestones
Project start (June 2001).

OK-040LT / Program Management and State Grants (Post 2006) 10 10 10

This project provides funding for the Oakland Operations Office to support and manage state grants and Oakland multiple site waste management and program support contracts.

- # Award funds to the San Francisco Regional Water Quality Control Board for the Lawrence Berkeley Laboratory.
- # Continue to process integrated program support and waste treatment and disposal contracts.

OK-041ND / Advanced Waste Treatment and Environmental Technologies (Non-Defense) 0 500 64

(dollars in thousands)

FY 2000	FY 2001	FY 2002

Activities in this project are to develop advanced technologies for both waste treatment and environmental restoration. Currently, the major activity involves the Lawrence Livermore National Laboratory developed Molten Salt Oxidation technology being commercialized by a waste treatment firm to treat DOE mixed low-level waste. Previously funded technologies as well as new technologies are always being evaluated for their potential and possible application and funding under this project.

- # Supports activities for technology application and processing DOE non-defense mixed waste using the Molten Salt Oxidation System.

OK-042 / ETEC Waste Management 1,809 3,200 3,500

This project accomplishes all necessary activities to manage and implement a waste management program for ongoing and planned environmental cleanup activities at the Energy Technology Engineering Center site. This project funds an existing facility that will provide centralized waste management of radioactive, and mixed waste generated from environmental cleanup activities and transportation of wastes for its final disposition.

- # Continue operation of the Radioactive Material Handling Facility.
- # Continue certification and packaging of transuranic waste.
- # Continue low-level waste disposal.
- # Continue mixed low-level waste disposal.

Metrics			
Transuranic Waste			
Shipped to Waste Isolation Pilot Plant	0	2	9
Mixed Low-Level Waste			
Treatment (m^3)	13	0	0
Disposal (m^3)	9	11	7

Total, Oakland 15,562 17,571 13,479

Explanation of Funding Changes From FY 2001 to FY 2002

FY 2002 vs. FY 2001 ($000)

OK-007 / ETEC Remediation

# Decrease in funding reflect delays in building demolitions.	-4,300
OK-009 / ETEC Landlord	
# Increase in funding reflects Integrated Safety Management System implementation.	305
OK-013 / General Electric D&D (Environmental Restoration)	
# Slight increase in funding reflects support surveillance and maintenance at General Electric. .	39
OK-041ND / Accelerated Waste Treatment and Environmental Technologies (Non-Defense)	
# Decrease in funding reflects deferral of planned commercialization activities for mixed low-level waste.	-436
OK-042 / ETEC Waste Management	
# Additional funds required in FY 2002 to ensure certification and packaging of remote and contact handled transuranic waste are ready for shipping.	300
Total Funding Change, Oakland	-4,092

Ohio

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Post 2006 Completion account, managed through the Ohio Field Office, is to support cleanup activities at the West Valley Demonstration Project in the State of New York.

Program Goal

The goal for the West Valley Demonstration Project, after completion of the vitrification/solidification of high-level waste tank heel material, is to decontaminate and decommission facilities used in carrying out the project, dispose of low-level and transuranic waste, and ship high-level waste containers to a Federal repository.

Program Objectives

The West Valley Demonstration Project will be returned to New York State upon completion of the DOE's responsibilities in accordance with the West Valley Demonstration Project Act. This is essentially driven by the availability of final disposal for the high-level waste canisters, which will be stored and monitored in the interim.

Significant Accomplishments and Program Shifts

West Valley Demonstration Project

- Safely maintained spent nuclear fuel in storage, supporting procedures development, safety concern resolution, annual Safety Analysis Report updates, and training programs (FY 2000).
- Completed training crews for fuel handling and cask unloading at the Idaho National Engineering and Environmental Laboratory (FY 2000).
- Completed the transition from maintaining safe storage of West Valley spent nuclear fuel to readying the fuel and systems to initiate shipments in FY 2001 to the Idaho National Engineering and Environmental Laboratory (FY 2000).
- Continued vitrification of high-level waste tank heels; produced ten canisters (FY 2000).

- # Continued efforts to resolve responsibility issues with New York State Energy Research and Development Authority (FY 2000).
- # Continue operation of vitrification facility to treat approximately 69 m^3 of high-level waste tank heels and residuals, reduce the remaining inventory to near 0 m^3; which will result in the production of approximately five to eight canisters of high-level waste for interim storage (FY 2001).
- # Complete installation of high-level waste tank heel removal equipment (FY 2001).
- # Begin implementation of the strategies developed for completion of vitrification and cutoff of tanks and facilities used for vitrification (FY 2001).
- # Continue deployment of Vitrification Expended Materials Processing System to retrieve and containerize high activity waste by-products of vitrification operations in preparation for the Vitrification Facility deactivation (FY 2001).
- # Continue routine site safety functions such as radioactive groundwater plume migration control (FY 2001).
- # Continue low-level, mixed low-level, and high-level waste storage activities and facility stabilization repairs (FY 2001).
- # Complete final design for the Remote Handled Waste Facility, initiate long lead equipment and preliminary site development, and continue head end cell equipment installation and system modifications (FY 2001).
- # Continue low-level waste characterization and shipping activities (FY 2001).
- # Add approximately five to eight high-level waste disposal ready canisters to the inventory in the interim on-site storage facility (FY 2001).
- # Begin and complete shipment of Spent Nuclear Fuel from West Valley to the Idaho National Engineering and Environmental Laboratory (FY 2001).
- # Support preparation and fuel receipt activities at the Idaho National Engineering and Environmental Laboratory (FY 2001).
- # Complete deactivation of the Vitrification Facility (subject to needs assessment tied to closure of the high-level waste tank); continue Remote-Handled Waste Facility construction; continue waste retrieval from the head-end cells and other decontamination efforts; initiate deactivation of spent fuel pool; publish Decontamination and Waste Management Environmental Impact Statement; continue preparation of Decommissioning Environmental Impact Statement; and continue low-level waste shipments (FY 2002).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
OH-WV-01 / HLW Vitrification and Tank Heel High Activity Waste Processing	52,151	52,800	38,000
OH-WV-02 / Site Transition, Decommissioning and Project Completion	43,806	44,386	54,115
OH-WV-03 / Spent Nuclear Fuel	9,120	8,400	3,000
Total, Ohio	105,077	105,586	95,115

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
West Valley Demonstration Project	105,077	105,586	95,115	-10,471	-9.9%
Total, Ohio	105,077	105,586	95,115	-10,471	-9.9%

Metrics Summary

	FY 2000	FY 2001	FY 2002
High-Level Waste			
Canisters Produced	10	5	0
Mixed Low-Level Waste			
Treatment (m^3)	131	5	60
Low-Level Waste			
Disposal (m^3)	954	1,415	700

Site Description

West Valley Demonstration Project

The West Valley Demonstration Project is located at the Western New York Nuclear Service Center near West Valley, New York, 35 miles south of Buffalo. The Center was developed by a private company with government support to process commercial spent nuclear fuel to extract plutonium and uranium and operated from 1966 to 1972.

The West Valley Demonstration Project Act (Public Law 96-368) was enacted in 1980 and directed the Department of Energy to carry out a high-level waste solidification demonstration project, including: 1) preparation of the Western New York Nuclear Service Center's premises and facilities to accommodate the solidification project, including decontamination of existing facilities and equipment; 2) removal of the waste from underground storage tanks; 3) development, design, construction, and operation of systems and necessary

supporting facilities for the solidification of waste; 4) acquisition of containers for permanent disposal of the solidified waste; 5) temporary storage of the solidified waste, followed by transportation to an appropriate Federal repository for permanent disposal; 6) decontamination and decommissioning of the waste tanks and facilities, material and hardware used in carrying out the solidification of the wastes; and 7) disposal of low-level and transuranic wastes produced from project activities.

The principal operation at West Valley thus far has been the solidification of approximately 2,200 m^3 of liquid high-level waste into borosilicate glass using vitrification. Prior to high-level waste solidification, a significant portion of the liquid high-level waste was pre-treated between 1988 and 1995. These pretreatment operations resulted in production of 20,000 drums of low-level waste, stabilized in cement, and reduced the amount of high-level waste inventory requiring the more costly vitrification treatment process. Vitrification operations for the remaining high-level waste began in 1996 and is scheduled for completion with final tank heel removal and processing in 2001. Following shutdown of the vitrification processing systems in FY 2002, the vitrification and tank farm facilities will be deactivated in preparation for decontamination and final dispositioning.

To continue progress toward fulfillment of the West Valley Demonstration Project Act mandates, and as vitrification treatment operations near completion, the project is preparing for its next major phase which is decontamination and waste management. A Remote-Handled Waste Facility is in the early stages of construction which will allow project personnel to safely remotely handle, size reduce, sort, characterize, and package the project's high activity waste in preparation for off-site shipment and disposal. The project is also transitioning its personnel from operations to decontamination and decommissioning and a number of projects are being executed across the site and within the old main plant facility in preparation for decontamination efforts to be supported after shutdown of vitrification operations.

Following site decontamination and waste management activities, the project will pursue final dispositioning and site closure, which will be implemented consistent with an Environmental Impact Statement under development. The activities planned for the project in the upcoming years are not dependent upon the final remediation decisions for the site currently being formulated between the DOE and New York State. The draft Environmental Impact Statement under development, which is being used as the basis for evaluating various closure options for the site, assumed a certain set of preconditions necessary before implementation of any of the site closure alternatives. The project continues to progress toward readiness for implementation of any of these final remediation activities.

The necessary decontamination and waste management activities to prepare the site for final decommissioning are expected to take several years to complete. The current life-cycle cost estimates and associated estimated completion dates for the project are based upon the DOE/Environmental Management's vision for site closure which is currently being utilized as the basis of discussions with New York State. Environmental Management feels confident that the current estimated life-cycle cost projected for the project will not be significantly modified once final remediation actions are determined. The scope that comprises Environmental Management's vision for site closure has been well received by the project's stakeholders to date.

The West Valley Demonstration Project has deployed a number of key technology development projects at its site. In FY 2000, successful technology development deployments included advanced waste retrieval, gamma camera, and vitrification expended materials processing projects.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

OH-WV-01 / High-Level Waste Vitrification and Tank Heel
High Activity Waste Processing 52,151 52,800 38,000

The high-level waste program at the West Valley Demonstration Project has encompassed the solidification of approximately 2,200 m^3 of liquid high-level waste into borosilicate glass using vitrification. Liquid high-level waste vitrification operations began in 1996, and will be completed in FY 2001. This represents a significant achievement for DOE and a critical activity toward completion of the West Valley Demonstration Project Act. In FY 2002, the vitrification processing facilities will undergo safe shutdown and will be prepared for decontamination and decommissioning. If vitrification of additional materials from the high-level waste tank is necessary to achieve closure is required, the melter will remain available.

Complete the vitrification operations shutdown (-$14,800,000), which involves flushing and systematic shutdown of the operating systems, procurement of equipment that will support this effort, and Vitrification Expended Materials Processing.

Key Milestones

Complete waste incidental to reprocessing determinations for the Waste Tank Farm (July 2001).

Complete high-level waste tank heel/residuals vitrification processing (September 2001).

Complete high-level waste tanks 8D1 and 8D-2 Radionuclide Inventory (September 2001).

Remove residual transuranic waste radioactivity from high-level waste tank 8D-2 (September 2001).

OH-WV-02 / Site Transition, Decommissioning, and Project
Completion 43,806 44,386 54,115

The activities in this PBS encompass the scope required to fulfill project completion responsibilities per the West Valley Demonstration Project Act including removal of high-level waste canisters and transuranic waste from project facilities, disposition of low-level waste, and other activities associated with the final National Environmental Policy Act documents currently under development. Increase ($9,729,000) for additional decontamination and decommissioning, including Remote-Handled Waste Facility construction and head-end cell work. If the melter is shutdown, some of these funds will be transferred to PBS OH-WV-01, High-Level Waste Vitrification and Tank Heel High Activity Waste Processing.

Continue safe storage of high-level waste canisters.

(dollars in thousands)

FY 2000	FY 2001	FY 2002

- # Continue progress toward construction of the Remote-Handled Waste Facility to provide transuranic/high activity waste packaging capability for disposition of the West Valley Demonstration Project Act wastes.
- # Continue head end cell high activity waste/spent nuclear fuel debris removal efforts to containerize loose spent nuclear fuel materials in former spent fuel processing cells.
- # Perform low-level waste shipping to offsite disposal facilities required to offset waste generation from decontamination and decommissioning activities and reduce storage requirements for low-level waste.
- # Continue to conduct project management and site support activities at an appropriate level for safe site configuration and compliance.

Metrics			
High-Level Waste			
Canisters Produced	10	5	0
Low-Level Waste			
Disposal (m^3)	954	1,415	700
Mixed Low-Level Waste			
Treatment (m^3)	131	5	60

Key Milestones

- # Complete removal of process mechanical cell cranes and install the Bridge Mounted Manipulator System (April 2001).
- # Begin mobilization for construction of the Remote-Handled Waste Facility (June 2001).
- # Complete evaluation of permeable treatment wall pilot (June 2001).
- # Complete final design of the Remote-Handled Waste Facility (August 2001).
- # Complete preparations and initiate waste removal in process mechanical cell (September 2001).
- # Ship 50,000 cubic feet of Class A low-level waste off-site for disposal (September 2001).
- # Complete preparations and initiate low-level waste shipments to the Nevada Test Site (September 2001).
- # Ship 15,000 cubic feet of waste off-site for disposal (September 2002).
- # Continue construction of the Remote-Handled Waste Facility System (September 2002).
- # Continue decontamination of former spent fuel reprocessing facility high risk areas (September 2002).

(dollars in thousands)

FY 2000	FY 2001	FY 2002

Continue Head End Cell (Process Mechanical Cell and General Purpose Cell) spent fuel debris waste characterization and packaging (September 2002).

Continue efforts to mitigate the migration of contaminated groundwater plume (September 2002).

OH-WV-03 / Spent Nuclear Fuel 9,120 8,400 3,000

The West Valley Demonstration Project contains 125 irradiated commercial spent nuclear fuel elements that must be removed from the West Valley Demonstration Project per agreement with the State of Idaho and State of New York. The National Spent Nuclear Fuel Program schedule indicates that the West Valley Demonstration Project spent nuclear fuel will be shipped to the Idaho National Engineering and Environmental Laboratory during the six month window of opportunity between April and September of FY 2001, after which time the fuel receiving and storage area will be deactivated to the extent possible.

Maintain safe spent nuclear fuel storage pool configuration in preparation of spent nuclear fuel storage rack removal, pool sludge cleanup, and pool deactivation activities.

Key Milestones

Complete the spent nuclear fuel cask loading operations into Transnuclear-Casks (June 2001).

Begin cleanup of Fuel Receiving and Storage Facilities (October 2001).

Total, Ohio 105,077 105,586 95,115

Explanation of Funding Changes from FY 2001 to FY 2002

FY 2002 vs. FY 2001 ($000)

OH-WV-01 / High Level Waste Vitrification and Tank Heel High Activity Waste Processing

Decrease of funds reflects the completion of vitrification in FY 2001 (subject to high-level waste tank closure completion). . . . . -14,800

OH-WV-02 / Site Transition, Decommissioning and Project Completion

	FY 2002 vs. FY 2001 ($000)
# Increase of funds reflect additional decontamination and decommissioning, including Remote-Handled Waste Facility work and head-end cell cleanup work.	9,729
OH-WV-03 / Spent Nuclear Fuel	
# Decrease of funds reflects the completion of spent nuclear fuel storage and shipment program in FY 2001.	-5,400
Total Funding Change, Ohio	-10,471

Multi-Site

Mission Supporting Goals and Objectives

Program Mission

The mission of the Non-Defense Environmental Management, Post 2006 Completion account, carried out by the Multi-Site activity is to support the Packaging Certification and Transportation efforts. The Environmental Management program is being responsive to the General Accounting Office and others who have pushed for greater emphasis on national focus for the EM programs.

Program Goal

The overall goal of the Multi-Site activity is to better coordinate EM-wide and Department of Energy (DOE)-wide program efforts and avoid overlaps and inconsistencies.

The mission of the Packaging Certification and Transportation program is to support the protection of people and property from the potential consequences of normal and accident conditions of transport involving hazardous materials. The goals to support this mission are:

- Improve safety of packages used to transport hazardous materials through a program of design reviews and performance tests, and quality verification that satisfy internal operations and organizations external to the Department.
- Improve existing and develop new processes to maximize the efficiencies of these reviews and tests. Maintain an open and effective system of communication and coordination both internal and external to the Department.
- Ensure the package safety policies protect workers, the public, and the environment while providing program flexibility in accomplishing Departmental missions.
- Ensure that the Packaging Certification and Safety Program is the Department's technical knowledge and analysis center for hazards classifications, design reviews, package training support and safety requirements.
- Ensure that package safety policies are coordinated with all affected customers and provide sufficient clarity of guidance to be correctly implemented.

Program Objectives

The Multi-Site activities focus' national attention on areas that support Environmental Management-wide goals and planned efforts. Many of these activities cut across the entire Department of Energy complex and operations.

Significant Accomplishments and Program Shifts

Packaging Certification

- # Continue efforts to reduce the backlog of safety reviews for packagings (FY 2000/FY 2001/FY 2002).
- # Represented the Department of Energy in the United States delegation supporting international transportation safety and packaging certification regulations (FY 2000).
- # Approve more than 30 packages and conducted two audits (FY 2001).

Funding Schedule

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
HQ-PC-001 / Packaging Certification	3,501	3,544	3,544
Total, Multi-Site	3,501	3,544	3,544

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Multi-Site	3,501	3,544	3,544	0	0.0%
Total, Multi-Site	3,501	3,544	3,544	0	0.0%

Site Description

Within the Multi-Site budget, the Packaging Certification and Transportation Safety program activities provide for developing, coordinating, and implementing policies, standards, and guidance for aviation, maritime, rail, highway, pipeline, and hazardous materials safety for the Department. Under the authority provided by the United States Department of Transportation in 49 CFR, this program certifies Fissile and Type B packages for the transportation of radioactive materials for the Department. Evaluation and analysis of the Department of Energy line organizations' safety analysis reports for packaging are performed, in addition to providing external coordination between the Government and other governmental, commercial, and international bodies regarding packaging certification and transportation safety systems.

Detailed Program Justification

(dollars in thousands)

	FY 2000	FY 2001	FY 2002
HQ-PC-001 / Packaging Certification	**3,501**	**3,544**	**3,544**

The Packaging Approval and Transportation Safety program supports the protection of people and property from the potential consequences of normal and accidental conditions of transport involving hazardous materials. This program addresses the need for robust packages that provide containment in the event of a transportation incident or accident and the concerns of internal and external stakeholders. Activities also include developing, coordinating, and implementing policies, standards, and guidance related to aviation, maritime, rail, highway, pipeline, and hazardous materials safety.

This program performs evaluations and analyses of safety analysis reports for packaging; tests packages; and provides external coordination between the Department and other governmental, commercial, and international bodies regarding transportation safety and packaging certification; participation in the development of transportation safety and packaging standards by national and international organizations; coordinating within the Department all matters pertaining to hazardous materials package certification and transportation safety; and overseeing field aviation, maritime, rail, highway, and pipeline safety implementation activities as they relate to the transportation of personnel and hazardous materials.

- **#** Approve more than 30 applications and conduct two audits.
- **#** Update the Package Review Guide.

Total Multi-Site	**3,501**	**3,544**	**3,544**

Explanation of Funding Changes from FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
HQ-PC-001 / Packaging Certification	
# No changes	0
Total Funding Change, Multi-Site	0

Excess Facilities

Program Mission

The mission of the Non-Defense Excess Facilities, carried out for the Department by the Environmental Management Program in collaboration with the transferring programs, is to manage the transfer for the final disposition of excess contaminated physical facilities leading to significant risk and cost reductions. This will facilitate the cross-program transfer of excess contaminated facilities from the Office of Science to Environmental Management (EM) along with the associated deactivation and decommissioning activities.

Program Goal

The Department's overall goal of the Non-Defense Excess Facilities is to resume the transfer and disposition of the excess contaminated facilities from across the Department's many programs for deactivation and decommissioning. Many of these facilities have existed far beyond their intended useful life and require expenditures of surveillance and maintenance funds to remain in a safe condition. Deactivation and decommissioning, when complete, will reduce or eliminate these expenditures.

In FY 2002, the Department will resume the transfer of contaminated excess facilities to EM from other programs for management and deactivation and decommissioning. These will be the first transfers under DOE Order (435.1A) on Life-Cycle Asset Management, revised in October 1998. The Department anticipates that additional excess facilities will transfer to the EM program for disposition in future years. These transfers will set the stage for the cleanup of facilities no longer needed for mission work to begin in accordance with EM cleanup priorities. Additional funding is necessary to actually accomplish decommissioning of these facilities.

Program Objectives

- Establish an efficient and effective, long-term approach for managing the transfer of excess facilities to EM.
- Maintain excess facilities in a safe and stable condition until deactivation and decommissioning activities can begin.

Significant Accomplishments and Program Shifts

The FY 2002 request includes funds for surveillance and maintenance to enable EM to manage these newly transferred facilities safely based on a budget transfer from the DOE program that currently "owns" the facility. These newly transferred facilities constitute new work scope for the EM program. Accordingly, EM is requesting the funding for these newly transferred facilities in a separate program account from other EM activities previously included in its life-cycle estimates to give visibility to the Department and the Congress on

the cost and progress associated with new excess facility transfers taking place in FY 2002 and beyond. This will allow EM to maintain reporting on performance metrics, life-cycle costs and completion dates for the scope of work previously outlined in the FY 2001 and prior EM budgets.

The FY 2002 request includes the transfer of excess facilities at the Brookhaven National Laboratory and Oak Ridge from other DOE organizations (Office of Science). The funding amounts transferred from those organizations is limited to surveillance and maintenance to maintain the facilities in a safe condition. The facilities have been transferred to EM in order to manage the final disposition of excess contaminated physical facilities leading to significant risk and cost reductions.

Funding Profile

(dollars in thousands)

	FY 2000 Comparable Appropriation	FY 2001 Original Appropriation	FY 2001 Adjustments	FY 2001 Comparable Appropriation	FY 2002 Request
Excess Facilities	0	0	0	0	1,381
Total, Non-Defense Excess Facilities	0	0	0	0	1,381

Funding by Site

(dollars in thousands)

	FY 2000	FY 2001	FY 2002	$ Change	% Change
Chicago/ Brookhaven National Laboratory	0	0	1,240	1,240	<999.9%
Oak Ridge/ Oak Ridge National Laboratory	0	0	141	141	<999.9%
Total	0	0	1,381	1,381	<999.9%

Funding Schedule

	FY 2000	FY 2001	FY 2002
CH-EF-01 / Chicago Excess Facilities	0	0	1,240
OR-EF-02 / Oak Ridge Excess Facilities (Non-Defense)	0	0	141
Total	0	0	1,381

Site Descriptions

Chicago Operations Office/Brookhaven National Laboratory/High Flux Beam Reactor

The Brookhaven National Laboratory site is a multi-purpose research and development laboratory located on Long Island, New York. Brookhaven's facilities are used for both basic and applied research in high energy and nuclear physics.

Oak Ridge Operations Office/Oak Ridge National Laboratory

The Oak Ridge National Laboratory has historically supported the civilian energy research effort by conducting applied and basic research in energy technologies and in the physical and life sciences. Facilities included for transfer are the research services building and the hot storage garden building.

Detailed Program Justification

(dollars in thousands)

FY 2000	FY 2001	FY 2002

The scope planned for FY 2002 has been reviewed and is appropriate to meet the goals of the Excess Facilities Transfer activities. The funds requested for FY 2002 are appropriate based on cost estimates and estimating models.

CH-EF-01/ Chicago Excess Facilities **0** **0** **1,240**

This project stabilizes, characterizes, deactivates, and decommissions the High Flux Beam Reactor (building 0750), a research reactor at Brookhaven National Laboratory.

Surveillance and maintenance will continue for the High Flux Beam Reactor following the FY 2000 and FY 2001 stabilization activities that were funded by the Office of Science.

(dollars in thousands)

FY 2000	FY 2001	FY 2002
OR-EF-02/ Oak Ridge Excess Facilities (Non-Defense)	**0**	**0**	**141**

Funding will be used to perform surveillance and maintenance, deactivation and decommissioning assessments on the Research Services (building 9735), and the Hot Storage Garden (building 3597).

Funding transfers from the Office of Science with surveillance and maintenance activities to maintain the facilities in a safe condition.

Total, Non-Defense Excess Facilities	0	0	1,381

Explanation of Funding Changes From FY 2001 to FY 2002

	FY 2002 vs. FY 2001 ($000)
CH-EF-01/ Chicago Excess Facilities	
# Comparable transfer of funding from the Office of Science.	1,240
OR-EF-02/Oak Ridge Excess Facilities	
# Comparable transfer of funding from the Office of Science.	141
Total Funding Change, Non-Defense Excess Facilities	1,381